U.S. Economy Declines Slightly in October; PMI Slips to 43.4%

OCTOBER REPORT

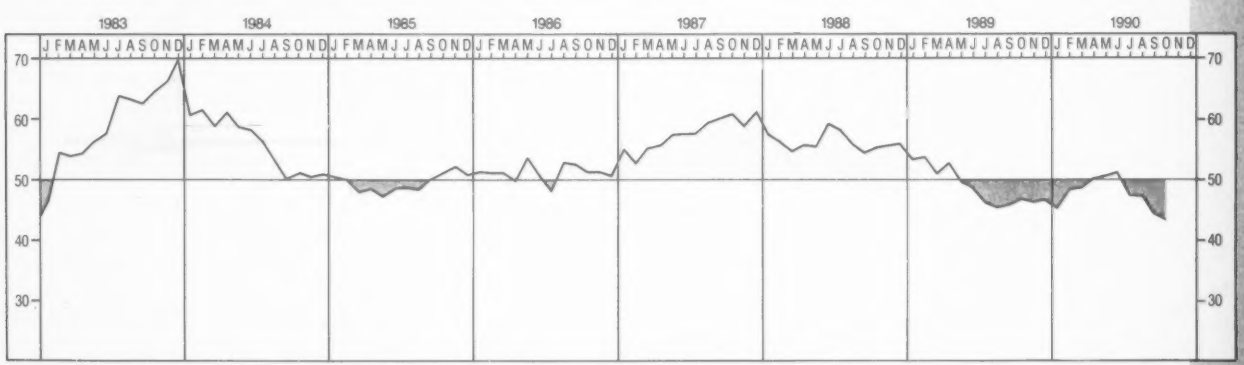
Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

The U.S. economy declined slightly in October for the first time since December 1982 as the Purchasing Managers' Index slipped below 44% indicating a declining GNP, say the nation's purchasing executives in their latest **Report on Business**. The Production Index declined for the third consecutive month to its lowest level in eight years. The New Orders Index declined in October for the fourth consecutive month and is the lowest since November 1982, the trough of the previous recession. New Export Orders continued to increase although at a lesser rate than in September. Imports declined for the sixth consecutive month although at a lesser rate than last month.

Supplier Deliveries were faster in October for the second consecutive month, mirroring the lower demand resulting from the declining economy. Inventories decreased for the 23rd consecutive month although at a lesser rate than in September. The Employment Index declined for the 20th consecutive month at the greatest rate since May 1985. The Price Index advanced another three points in October to the highest level since August 1988, once again almost entirely as a result of the Middle East crisis.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of materials management at Pitney Bowes, Inc. Said Bretz, "The fourth quarter began like the third quarter ended, with a decline in the manufacturing economy. Virtually all indicators confirmed the growing weakness in manufacturing, which was enough to pull the overall economy into slightly negative growth. With New Orders the weakest in eight years, immediate relief does not appear likely."

PURCHASING MANAGERS' INDEX



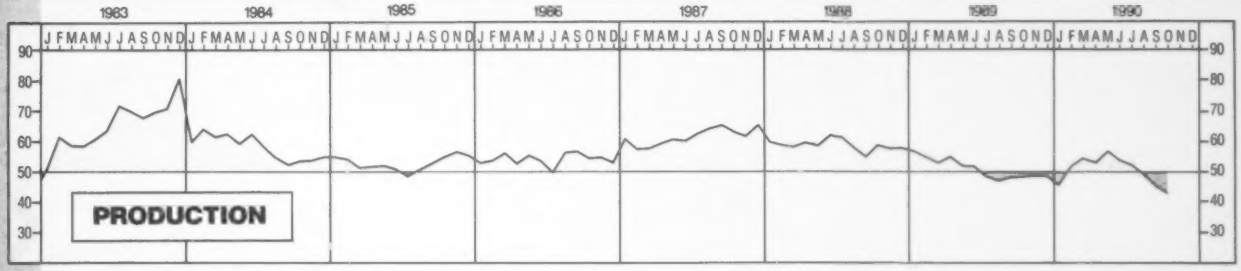
Peak — July 1981; Trough — November 1982.

PURCHASING MANAGERS' INDEX (PMI)

October '89	46.9	May '90	50.7
November '89	46.4	June '90	51.1
December '89	46.7	July '90	47.4
January '90	45.2	August '90	47.0
February '90	48.3	September '90	44.4
March '90	48.8	October '90	43.4
April '90	50.2		

The **Purchasing Managers' Index** (PMI) dropped another full point to 43.4%, registering its fourth consecutive decline. The 43.4% is the lowest this leading indicator has reached since December 1982 (42.8%), which was the first complete month of the current economic expansion. A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. Bretz added, "If the PMI remains unchanged at the October level for the remainder of the year, then past experience indicates this would be consistent with real GNP growth of about 1.0% for all of 1990. The October PMI at 43.4% is slightly below the 44% level signalling a small decline in real GNP."

BUSINESS



Peak — July 1981; Trough — November 1982.

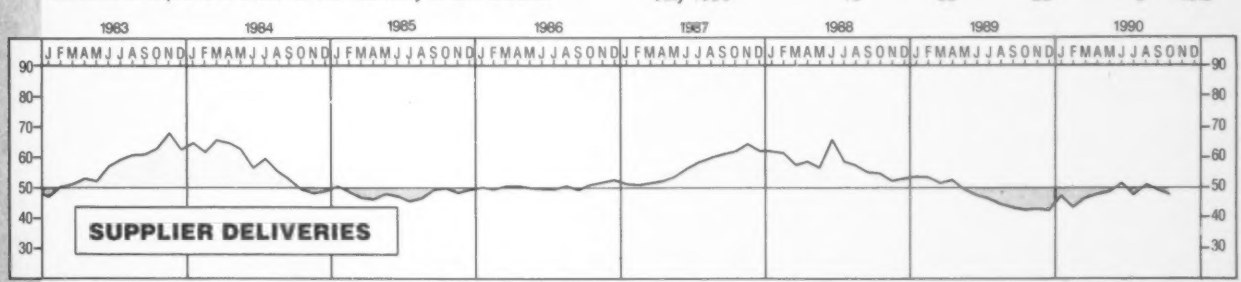
The sharp decline in New Orders in July, August, and September resulted in the third consecutive decline in Production in October. The Production Index fell further to 43.0% in October, down from 45.1% last month and from 56.3% as recently as May 1990. The continued weakness in New Orders suggests no near-term improvement in Production.

Production	%Better	%Same	%Worse	Net	Index
October 1990	17	52	31	−14	43.0
September 1990	23	48	29	− 6	45.1
August 1990	20	54	26	− 6	48.5
July 1990	19	58	23	− 4	52.1

Peak — July 1981; Trough — November 1982.

New Orders declined in October for the fourth consecutive month. The New Orders Index slipped to 43.8%, down from 44.5% in September. The 43.8% is at the lowest in eight years, since November 1982 (41.5%) which was at the trough of the previous recession. This index will have to improve in order for the economy to turn around.

New Orders	%Better	%Same	%Worse	Net	Index
October 1990	19	47	34	−15	43.8
September 1990	23	47	30	− 7	44.5
August 1990	21	49	30	− 9	46.4
July 1990	19	53	28	− 9	46.2



Peak — July 1981; Trough — November 1982.

Supplier Deliveries were faster in October for the second consecutive month, reflecting the slowing demand and apparent lack of any significant shortages. The Supplier Deliveries Index declined to 47.8%, down from 49.4% in September.

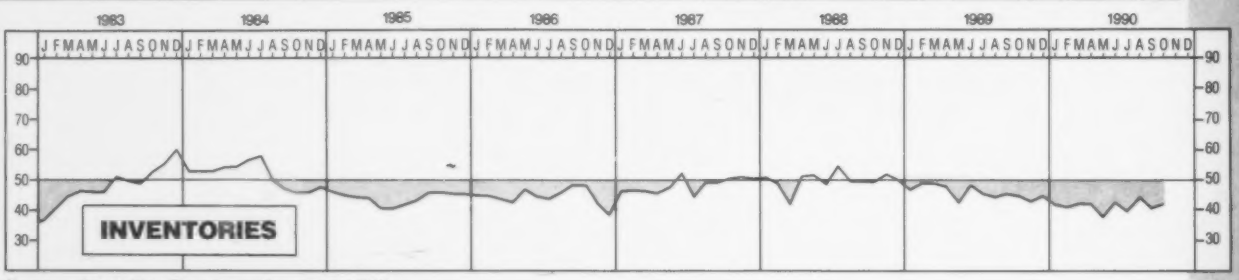
Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
October 1990	9	79	12	− 3	47.8
September 1990	7	85	8	− 1	49.4
August 1990	7	87	6	+ 1	51.1
July 1990	6	83	11	− 5	47.3

IN SHORT SUPPLY

Aluminum Foil; Bearings — 27th consecutive month; **Castings** — 2nd consecutive month; **Caustic Soda/Soda Ash** — 41st consecutive month (used heavily in paper-making, petroleum refining, and soap-making); **Methyl Ethyl Ketone (MEK)** — 2nd consecutive month (used heavily as a chemical solvent in surface coatings and making resins); **Propylene** — Used heavily in making polypropylene plastic and other chemicals; **Styrene** — 4th consecutive month (used chiefly in making synthetic rubber, plastic resins and plastic); **Xylene** — Used heavily in making benzoic acid, phthalic anhydride, polyester fibers, and dyes; **Acetate Filter** — Used in making filter-tip cigarettes.

UP IN PRICE

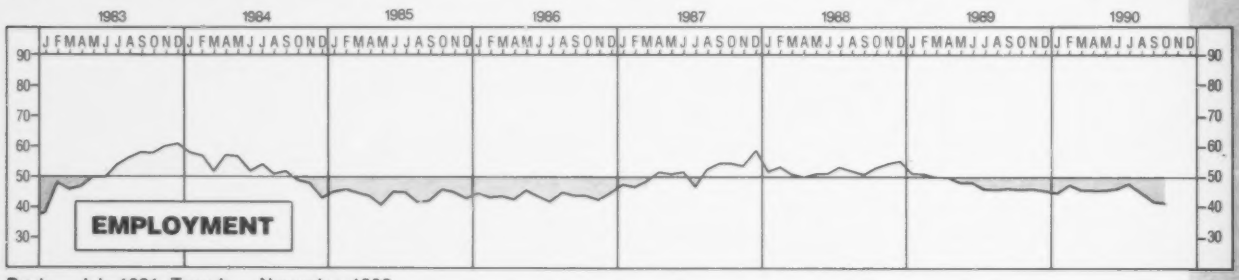
Aluminum — 2nd consecutive month, some reports of price decreases; **Brass; Copper** — 7th consecutive month, some reports of price decreases; **Linerboard; Acetaminophen** — Used in analgesics and making azo dyes and photographic chemicals; **Antifreeze** — 2nd consecutive month; **Ammonia** — Used in manufacturing nitric acid, explosives, synthetic fibers, fertilizers, in refrigeration and the chemical industry; **Alcohols** — 2nd consecutive month; **Acetone** — A solvent for fats, oils, waxes, resins, rubber, plastics, lacquers, and varnishes; **Base Oils** — 2nd consecutive month (used in extracting a variety of chemicals); **Benzene** — 2nd consecutive month (used heavily in making medicinal chemicals, dyes, varnishes, lacquers, and resins); **Caustic Soda/Soda Ash** — 47th consecutive month (used heavily in paper-making, petroleum refining, and soap making); **Ethylene** — 2nd consecutive month (used heavily in making ethylene oxide, plastic resins, and glycols); **Ethylene Glycol** — 2nd consecutive (used heavily in making antifreeze, brake fluid, plastics, paint, and ink); **Methyl Ethyl Ketone** — 2nd consecutive month (used heavily as a chemical solvent in surface coatings and making resins); **Solvents** — 3rd consecutive month (numerous solvents not specifically identified); **Sulfur** — 2nd consecutive month (used heavily in making sulfuric acid, matches, gunpowder, in bleaching wood pulp); **Sulfuric Acid** — 2nd consecutive month (used



Peak — July 1981; Trough — November 1982.

Inventories declined in October for the 23rd consecutive month although at a slightly lesser rate than in September. The Inventories Index rose to 42.0%, up slightly from 40.8% last month. Some members noted they brought in selected commodities earlier than needed in order to delay the impact of announced price increases.

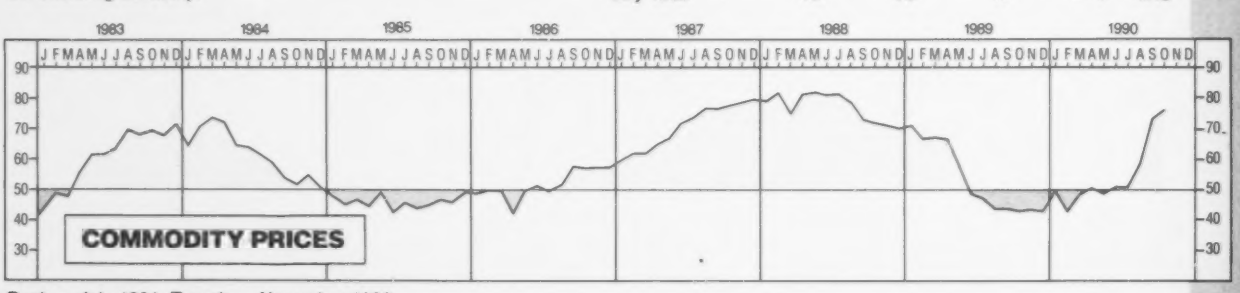
Inventories	%Higher	%Same	%Lower	Net	Index
October 1990	14	53	33	−19	42.0
September 1990	12	59	29	−17	40.8
August 1990	16	57	27	−11	44.1
July 1990	10	55	35	−25	39.3



Peak — July 1981; Trough — November 1982.

Employment declined further in October for the 20th consecutive month. The Employment Index fell to 40.7%, down from 41.5% in September. The 40.7% is the lowest rate since May 1985 (40.4%) and indicates manufacturers continue to adjust employment levels to reflect the declining economy.

Employment	%Higher	%Same	%Lower	Net	Index
October 1990	9	63	28	−19	40.7
September 1990	8	65	27	−19	41.5
August 1990	9	68	23	−14	44.1
July 1990	13	70	17	− 4	47.2



Peak — July 1981; Trough — November 1982.

Prices rose again in October for the fifth consecutive month. The Price Index rose to 76.4%, up from 73.4% in September and 48.5% as recently as May 1990. The surge in the Price Index is virtually 100% attributed to the Middle East crisis and the resulting increase in crude oil, petrochemical feed stocks, and derivatives, such as plastic resins, chemical solvents, and many other chemicals.

Prices	%Higher	%Same	%Lower	Net	Index
October 1990	56	38	6	+50	76.4
September 1990	50	44	6	+44	73.4
August 1990	22	68	10	+12	58.2
July 1990	12	77	11	+ 1	50.9

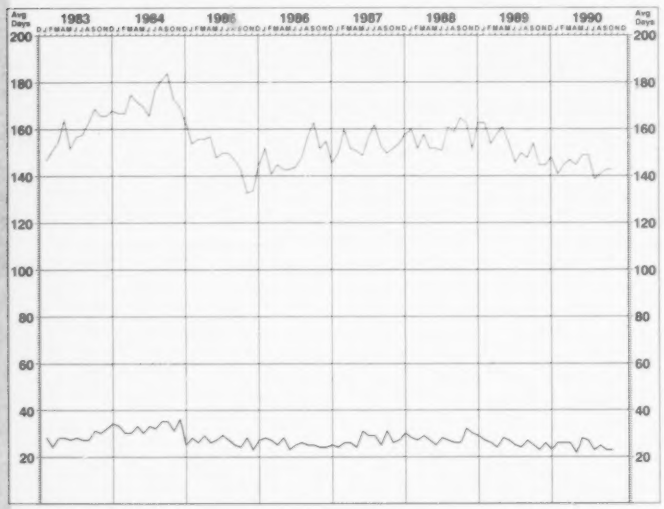
heavily in making fertilizers, dyes, adhesives, and other acids); **Toluene** — 2nd consecutive month (used heavily in making explosives, dyes, and benzoic acid, as a solvent in paint and as a gasoline additive); **Xylene** — 2nd consecutive month (used heavily in making benzoic acid, phthalic anhydride, polyester fibers, and dyes); **Phenol** — used heavily in making phenolic resins; **Plastic Resins** — 2nd consecutive month; **Thermoplastic Resins; Plastic Products; Polyethylene** — 2nd consecutive month; **Polypropylene** — 2nd consecutive month (used heavily in making fabrics, yarns, and carpets); **Polystyrene; Propylene** — 3rd consecutive month (used heavily in making polypropylene plastic and other chemicals); **Latex** — 2nd consecutive month (used heavily in coatings, paints, adhesives, and carpets); **Rubber** — 2nd consecutive month; **Styrene** — 3rd consecutive month (used chiefly in making synthetic rubber, plastic resins, and plastic); **Leather; Nylon; Polyester Yarn; Ink; Paint; Diesel Fuel** — 3rd consecutive month; **Gasoline** — 3rd consecutive month; **Fuel Oil** — 3rd consecutive month; **Lubricants; Natural Gas; Petrochemicals** — 2nd consecutive month (numerous petroleum-derived chemicals not specifically identified); **Petroleum Products** — 3rd consecutive month; **Propane** — 2nd time in 3 months; **Wax; Apple Juice;** and **Transportation Charges** — 2nd consecutive month (surcharges added to existing rates for truck, rail, and air freight charges as a consequence of significant increases in transportation fuels).

DOWN IN PRICE

Aluminum Scrap; Magnesium — 2nd time in 3 months (used heavily as a constituent of light alloys for manufacturing precision instruments); **Platinum** — 2nd time in 3 months; **Zinc** — 3rd consecutive month; **Lumber** — 5th consecutive month; **Corrugated Shipping Containers** — 9th consecutive month; **DRAMS** — 5th consecutive month; **Cheese; Corn** — 3rd consecutive month (used heavily in both food processing and papermaking); **Corn Sweeteners** — 2nd consecutive month (used heavily in making sweeteners, starches, and alcohol); **Milk; Sugar** — 3rd consecutive month; and **Orange Juice** — 2nd consecutive month.

BUYING POLICY

Overall buying policy did not change in October. The average lead times for Capital Expenditures remained unchanged from September at 143 days. The average lead times for Production Materials in October was 46 days, the same as last month. The average lead times for Maintenance, Repair, and Operating (MRO) Supplies was 23 days, unchanged from September.

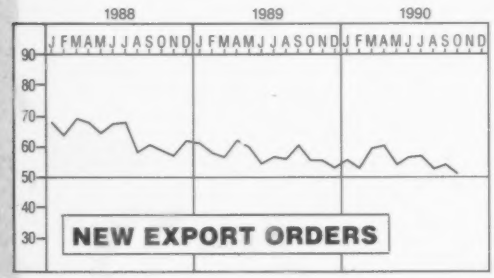


PERCENT REPORTING

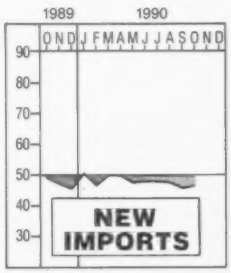
Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
October	12	7	12	24	28	17	143
September	12	8	12	19	34	15	143
August	13	5	14	23	29	16	141
July	14	4	13	22	33	14	139

Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
October	20	39	26	12	2	1	46
September	19	42	24	12	2	1	46
August	20	37	29	10	3	1	48
July	20	38	28	10	2	2	49

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
October	46	41	10	3	0	0	23
September	42	48	7	3	0	0	23
August	46	40	10	3	1	0	25
July	43	44	11	2	0	0	23



New Exp[illegible]ers continued to increase in October for the 34th consecutive month. However, the New Export Orders Index, not yet seasonally adjusted, only registered 51.0%, the lowest rate of growth since this indicator was initiated in January 1988. The percentage of members exporting dropped to 74%, down slightly from 76% in September.



Imports declined for the sixth consecutive month, although at a lesser rate than in September. The Imports Index, not seasonally adjusted, registered 46.5% in October. This was up a point from 45.5% in September which was the lowest level in nine months (along with December 1989, also 45.5%). The percentage of members importing fell to 75%, down from 81% last month.

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
October 1990	74	18	66	16	+ 2	51.0
September 1990	76	20	68	12	+ 8	54.0
August 1990	75	16	74	10	+ 6	53.0
July1990	74	24	66	10	+14	57.0

Imports	%Importing	%Higher	%Same	%Lower	Net	Index
October 1990	75	10	73	17	– 7	46.5
September 1990	81	5	81	14	– 9	45.5
August 1990	77	7	81	12	– 5	47.5
July 1990	76	9	78	13	– 4	48.0

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured [New Orders, New Export Orders, Imports, Production, Supplier Deliveries (formerly Vendor Deliveries), Inventories, Employment and Prices], this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

Responses to Buying Policy reflect the percent reporting the current months lead time, the approximate weighted number of days ahead for which commitments are made for Production Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.

Economy Declines Further, PMI At 41.3%; New Orders Index Lowest Since May '82

NOVEMBER REPORT

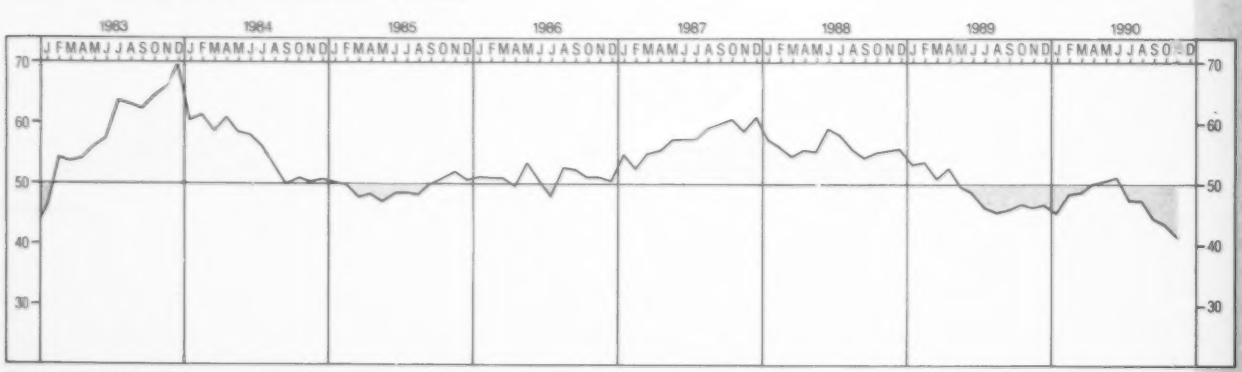
Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

The The U.S. economy declined further in November for the second consecutive month, say the nation's purchasing executives in their latest **Report on Business.** The Production Index declined for the fourth consecutive month and is the lowest since September 1982. The New Orders Index declined sharply in November for the fifth consecutive month to the lowest since May 1982, during the previous recession. New Export Orders increased significantly in November, but Imports declined sharply for the seventh consecutive month.

Supplier Deliveries were faster in November for the third consecutive month, but just barely. Inventories declined for the 24th consecutive month at about the same rate as in October. The Employment Index declined for the 21st consecutive month at the greatest rate in eight years. Prices increased in November again largely as a consequence of the Middle East crisis, but the rate of increase dropped sharply from October, a sign that the Middle East crisis-related inflation may have peaked last month.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of corporate purchasing at Pitney Bowes, Inc. Said Bretz, "The negative growth in the U.S. economy, registered in October for the first time in 10 years, has deepened in November. Almost all the indicators confirmed the decline in growth with the exception of Export Orders, which continues to support the economy from even greater decline. Nevertheless, with the engine of the economy, New Orders, at its lowest point in over eight years, it appears likely the negative trend will continue for some time."

PURCHASING MANAGERS' INDEX



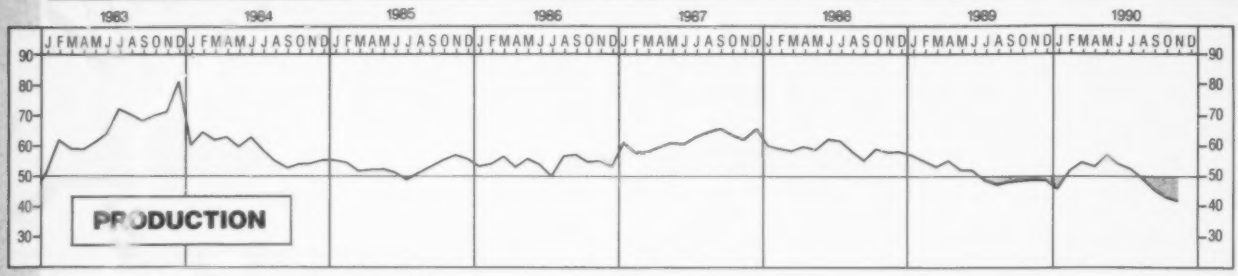
Peak — July 1981; Trough — November 1982.

PURCHASING MANAGERS' INDEX (PMI)

November '89	46.4	June '90	51.1
December '89	46.7	July '90	47.4
January '90	45.2	August '90	47.0
February '90	48.3	September '90	44.4
March '90	48.8	October '90	43.4
April '90	50.2	November '90	41.3
MAY '90	50.7		

The **Purchasing Managers' Index** (PMI) declined more than two points to 41.3% in November, the fifth consecutive decline. The 41.3% marked the lowest this leading indicator has been since the trough of the previous recession, November 1982 (39.2%). A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. However, for the entire economy to indicate a decline, the PMI would have to fall below 44%, a level it has been at for two consecutive months. Bretz added, "If the PMI remains unchanged at the November level for December, then past experience indicates this would be consistent with real GNP growth of approximately 0.9% for all of 1990 and a decline in the fourth quarter real GNP of approximately 0.6%."

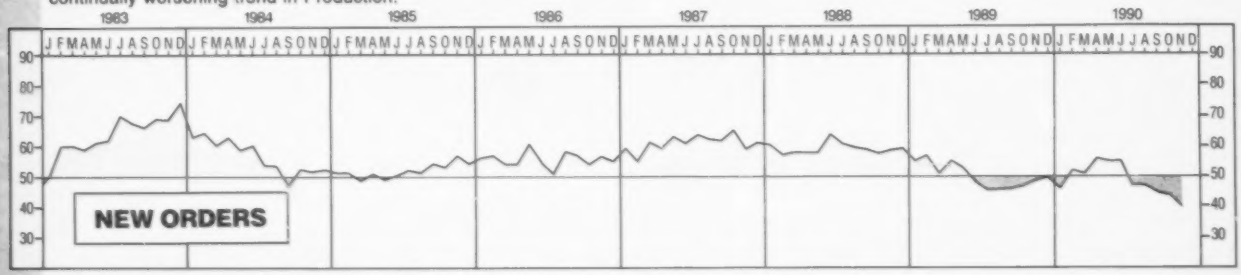
BUSINESS



Peak — July 1981; Trough — November 1982.

The Production Index fell for the fourth consecutive month to 41.8%, down from 43.0% in October. The 41.8% is the lowest this indicator has registered since September 1982 (41.3%) during the previous recession. Considering that the New Orders Index is the weakest in over eight years, it is unrealistic to expect a reverse soon in the six-month continually worsening trend in Production.

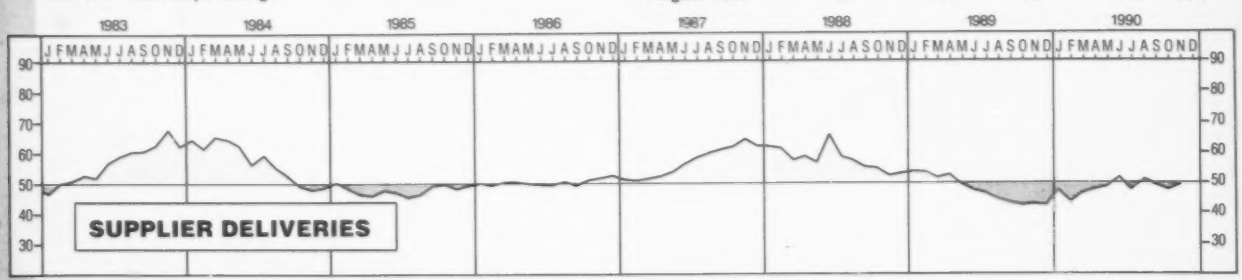
Production	%Better	%Same	%Worse	Net	Index
November 1990	16	49	35	–19	41.8
October 1990	17	52	31	–14	43.0
September 1990	23	48	29	– 6	45.1
August 1990	20	54	26	– 6	48.5



Peak — July 1981; Trough — November 1982.

New Orders declined in November for the fifth consecutive month. The New Orders Index fell to 39.4%, a sharp drop from 43.8% in October. The 39.4% is the lowest since May 1982 (38.1%), which was the tenth month of the previous recession. The economic decline will not bottom until this index stops falling.

New Orders	%Better	%Same	%Worse	Net	Index
November 1990	18	39	43	–25	39.4
October 1990	19	47	34	–15	43.8
September 1990	23	47	30	– 7	44.5
August 1990	21	49	30	– 9	46.4



Peak — July 1981; Trough — November 1982.

Supplier Deliveries were faster in November for the third consecutive month, although at a lesser rate than in the two previous months. The Supplier Deliveries Index rose to 49.6%, from 47.8% in October.

Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
November 1990	9	80	11	– 2	49.6
October 1990	9	79	12	– 3	47.8
September 1990	7	85	8	– 1	49.4
August 1990	7	87	6	+ 1	51.1

IN SHORT SUPPLY

Acetate Filter — 2nd consecutive month (used in making filter-tip cigarettes); **Aluminum Foil** — 2nd consecutive month; **Bearings** — 28th consecutive month; **Castings** — 3rd consecutive month; **Caustic Soda/Soda Ash** — 42nd consecutive month; **Methyl Ethyl Ketone (MEK)** — 3rd consecutive month (used heavily as a chemical solvent in surface coatings, and making resins); **Propylene** — 2nd consecutive month; **Propylene Glycol** — Used as a nontoxic antifreeze, a solvent for pharmaceuticals, a substitute for ethylene glycol, an emulsifier in foods, and in making synthetic resins; **Propylene Oxide** — Used heavily in preparation of polyethers to form polyurethanes, propylene and dipropylene glycols, lubricants, surfactants, and oil demulsifiers; **Xylene** — 2nd consecutive month (used heavily in making benzoic acid, phthalic anhydride, polyester fibers, and dyes; **Textile Dyes**.

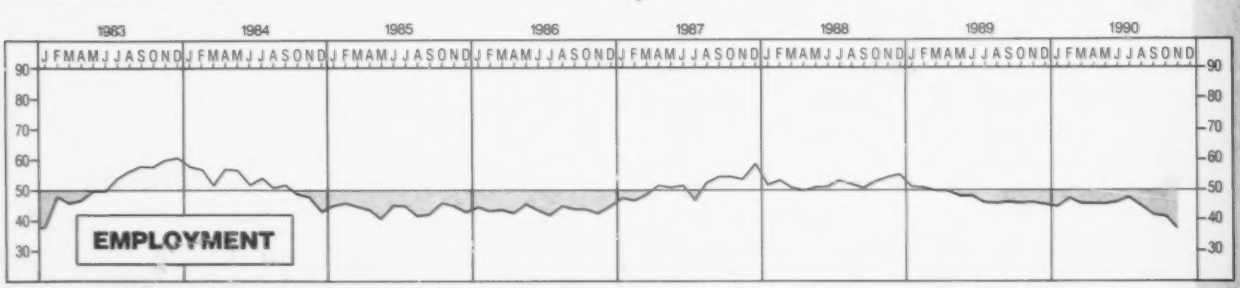
UP IN PRICE

Acetaminophen — 2nd consecutive month (used in analgesics, and making azo dyes and photographic chemicals); **Antifreeze** — 3rd consecutive month; **Ammonia** — 2nd consecutive month; **Benzene** — 3rd consecutive month; **Caustic Soda/Soda Ash** — 48th consecutive month; **Ethylene** — 3rd consecutive month (used heavily in making ethylene oxide, plastic resins, and glycols); **Methanol** — After being reported down in price in September for the 4th consecutive month; **Methyl Ethyl Ketone (MEK)** — 3rd consecutive month; **Solvents** — 4th consecutive month; **Sulfur** — 3rd consecutive month; **Sulfuric Acid** — 3rd consecutive month (used heavily in making fertilizers, dyes, adhesives, and other acids); **Toluene** — 3rd consecutive month (used heavily in making explosives, dyes, and benzoic acid, as a solvent in paint and as a gasoline additive); **Xylene** — 3rd consecutive month (used heavily in making benzoic acid, phthalic anhydride, polyester fibers, and dyes); **Phenol** — 2nd consecutive month; **Plastic Resins** — 3rd consecutive month; **Polyethylene** — 3rd consecutive month (used heavily in making plastic packaging materials, kitchenware, tank and pipe linings, paper coatings, and textile stiffeners); **Polypropylene** — 3rd consecutive month (used heavily in making plastic fabric, yarns, carpets, and packaging materials); **Polystyrene** — 2nd consecutive month; **Polyvinyl Chloride (PVC)**; **Propylene** — 4th consecutive month (used heavily in making polypropylene

Peak — July 1981; Trough — November 1982.

Inventories declined in November for the 24th consecutive month at almost the same rate as in October. The Inventories Index rose to 42.3%, up slightly from 42.0% last month. Purchasers seem bent on lowering their inventory-to-sales ratio even further as manufacturers ride out the decline in sales.

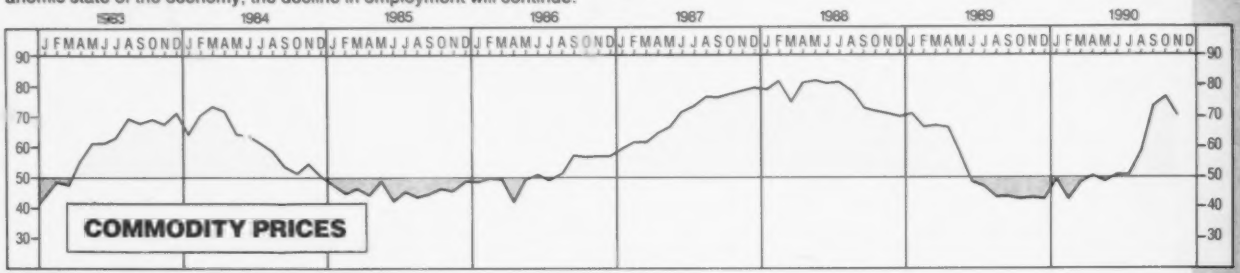
Inventories	%Higher	%Same	%Lower	Net	Index
November 1990	12	54	34	–22	42.3
October 1990	14	53	33	–19	42.0
September 1990	12	59	29	–17	40.8
August 1990	16	57	27	–11	44.1



Peak — July 1981; Trough — November 1982.

The Employment Index fell to 36.7% in November, a sharp four point drop from October (40.7%) and the lowest since December 1982 (36.3%). Numerous members reported actions taken to reduce employment, including layoffs, plant closings, reductions through attrition and hiring freezes, and voluntary early retirement programs. Given the anemic state of the economy, the decline in employment will continue.

Employment	%Higher	%Same	%Lower	Net	Index
November 1990	5	62	33	–28	36.7
October 1990	9	63	28	–19	40.7
September 1990	8	65	27	–19	41.5
August 1990	9	68	23	–14	44.1



Peak — July 1981; Trough — November 1982.

The Price Index registered 68.7%, down from 76.4% in October. With few exceptions, most of the price increases were directly related to the rise in crude oil prices. Purchasers are fiercely resisting price increases. It is likely we have seen the peak in the Middle East crisis-related inflation and that price increases will largely subside in the future.

Prices	%Higher	%Same	%Lower	Net	Index
November 1990	44	46	10	+34	68.7
October 1990	56	38	6	+50	76.4
September 1990	50	44	6	+44	73.4
August 1990	22	68	10	+12	58.2

plastic and acetone, isopropyl alcohol, phenol, propylene oxide, and other chemicals); **Propylene Oxide** — 2nd time in 5 months; **Latex** — 3rd consecutive month; **Rubber** — 3rd consecutive month; **Rubber Products; Styrene** — 4th consecutive month; **Adhesives; Paint** — 2nd consecutive month; **Diesel Fuel** — 4th consecutive month; **Gasoline** — 4th consecutive month; **Fuel Oil** — 4th consecutive month; **Lubricants** — 2nd consecutive month; **Natural Gas** — 2nd consecutive month; **Petrochemicals** — 3rd consecutive month; **Petroleum Products** — 4th consecutive month; **Propane** — 3rd time in 4 months; **Peanuts** — 3rd time in 4 months; **Black Pepper; Transportation Charges** — 3rd consecutive month.

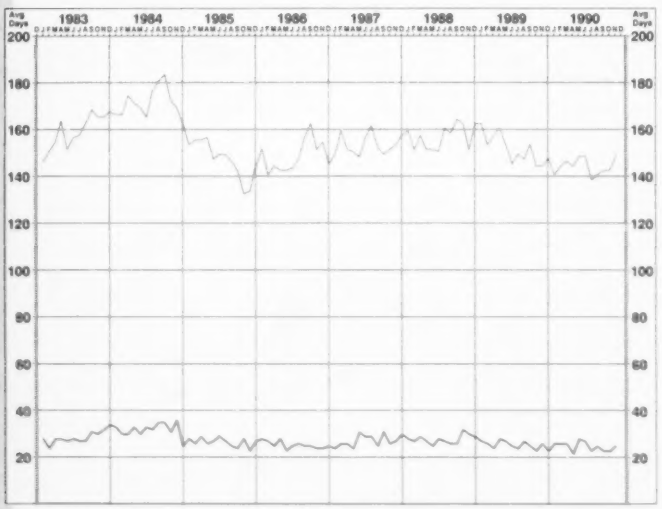
DOWN IN PRICE

Aluminum — After being reported up in price in October, some reports of price increases; **Aluminum Cans; Brass** — After being reported up in price in October; **Copper** — After being reported up in price in October for 7th consecutive month, still some reports of price increases; **Magnesium** — 3rd time in 4 months; **Nickel; Steel Scrap** — After being reported up in price in September; **Tin; Zinc** — 4th consecutive month; **Bearings** — After being reported up in price in August for the 23rd time in 26 months; **Corrugated Shipping Containers** — 10th consecutive month; **Linerboard** — 8th time in 9 months; **Lumber** — 6th consecutive month; **Newsprint; Wood Pulp; Citric Acid** — Used heavily in beverages, jellies, jams, candy, confectionery, and in food processing; **Titanium dioxide** — A lead-free pigment used as a whitener in coatings, paints, paper, and other industrial applications; **Zinc Oxide** — 2nd time in 3 months (used heavily as a pigmentation in paints and inks, in cosmetics, driers, quick-setting cement, and copier paper); **DRAMS** — 6th consecutive month; **Leather; Cheese** — 2nd consecutive month; **Corn Starch** — 2nd time in 3 months; **Corn Sweeteners** — 3rd consecutive month ; **High Fructose Corn Syrup; Orange Juice** — 3rd consecutive month; **Sugar** — 4th consecutive month.

BUYING POLICY

Overall lead times lengthened in November compared to the previous two months. The average lead times for Capital Expenditures in November increased to 149 days, up from 143 days in both October and September. Purchasers noted delays in receiving equipment orders, primarily as a consequence of competing orders from off shore.

The average lead times for Production Materials decreased to 45 days, down from 46 days in October. The average lead times for Maintenance, Repair, and Operating (MRO) Supplies expanded to 25 days, up from 23 days in both October and September and the same as in August.

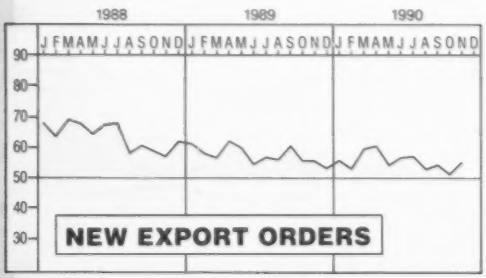


PERCENT REPORTING

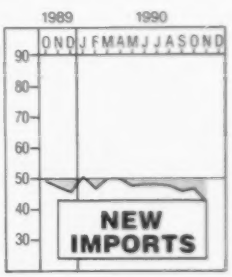
Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
November	11	7	13	18	34	17	149
October	12	7	12	24	28	17	143
September	12	8	12	19	34	15	143
August	13	5	14	23	29	16	141

Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
November	18	44	26	9	2	1	45
October	20	39	26	12	2	†	46
September	19	42	24	12	2	1	46
August	20	37	29	10	3	1	48

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
November	43	45	8	3	1	0	25
October	46	41	10	3	0	0	25
September	42	48	7	3	0	0	23
August	46	40	10	3	1	0	25



New Export Orders increased in November for the 35th consecutive month. The New Export Orders Index, not yet seasonally adjusted, registered 55.0%, up sharply from 51.0% in October, which was the lowest rate of growth since this indicator was initiated in January 1988. The percentage of members was 75%, the average of the past four months.



Imports declined in November for the seventh consecutive month. The Imports Index, not seasonally adjusted, was 42.0%, a sharp drop from 46.5% in October. The 42.0% is the lowest level since this indicator was initiated in October 1989. The percentage of members importing was 76%, up slightly from 75% last month.

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
November 1990	75	21	68	11	+10	55.0
October 1990	74	18	66	16	+ 2	51.0
September 1990	76	20	68	12	+ 8	54.0
August 1990	75	16	74	10	+ 6	53.0

Imports	%Importing	%Higher	%Same	%Lower	Net	Index
November 1990	76	6	72	22	–16	42.0
October 1990	75	10	73	17	– 7	46.5
September 1990	81	5	81	14	– 9	45.5
August 1990	77	7	81	12	– 5	47.5

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured (New Orders, New Export Orders, Imports, Production, Supplier Deliveries (formerly Vendor Deliveries), Inventories, Employment and Prices), this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

Responses to Buying Policy reflect the percent reporting the current months lead time, the approximate weighted number of days ahead for which commitments are made for Production Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.

Economic Decline Intensifies; PMI Slips to 40.4%; New Orders and Production Continue to Drop

DECEMBER REPORT

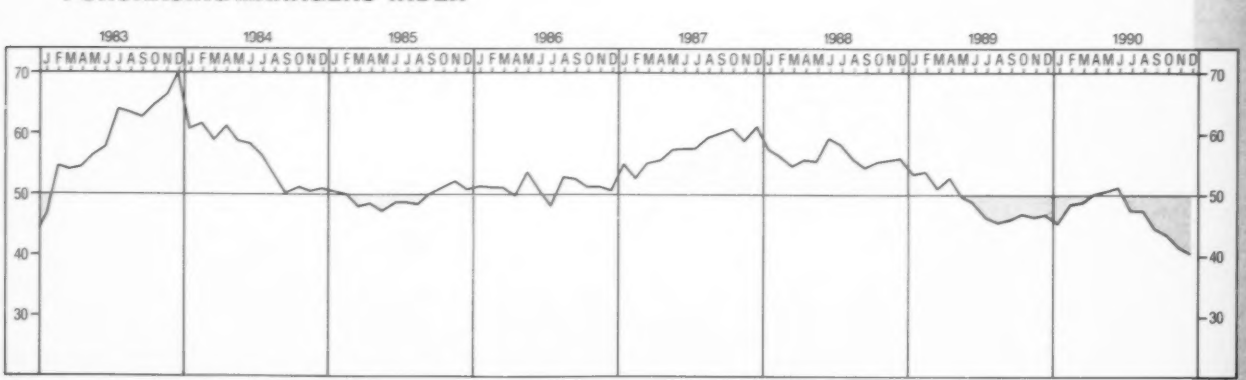
Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of corporate purchasing, Pitney Bowes, Inc.

The U.S. economy declined further in December for the third consecutive month, say the nation's purchasing executives in their latest **Report on Business.** The Production Index declined for the fifth consecutive month and is the lowest since August 1982. The New Orders Index also declined further in December for the sixth consecutive month and is at the lowest level since May 1982. New Export Orders continued to grow in December at the same relatively strong rate as November. The Imports Index declined for the eighth consecutive month but at a slightly lesser rate than last month.

The Supplier Deliveries fell for the fourth consecutive month reflecting the significantly lower demand as a consequence of declining production. Inventories declined again in December for the 25th consecutive month as purchasers continued to match lower production with lower inventory. The Employment Index declined for the 22nd consecutive month but at a lesser rate than in November. Although Prices rose again in December for the seventh consecutive month, the rate of increase dropped sharply for the second month in a row, confirming last month's signal that Middle East crisis-related inflation peaked in October.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of corporate purchasing at Pitney Bowes, Inc. Said Bretz, "The final quarter of the 1990 economy ended on a somber note; the first declining quarter since the previous recession. Virtually all the indicators satisfied that conclusion with the sole exception of New Export Orders which continues to keep the economy from even further decline. Nevertheless, overall New Orders continues to search for a bottom and, until it finds it, the economy will continue to decline."

PURCHASING MANAGERS' INDEX



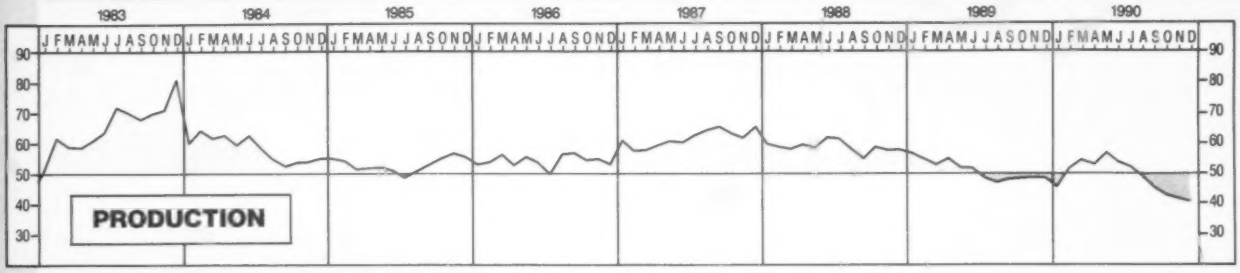
Peak — July 1981; Trough — November 1982.

PURCHASING MANAGERS' INDEX (PMI)

December '89	46.7	July '90	47.4
January '90	45.2	August '90	47.0
February '90	48.3	September '90	44.4
March '90	48.8	October '90	43.4
April '90	50.2	November '90	41.3
May '90	50.7	December '90	40.4
June '90	51.1		

The **Purchasing Managers' Index** (PMI) fell to 40.4% in December, down from 41.3% in November and the lowest since the trough of the previous recession, November 1982 (39.2%). The 40.4% marked the sixth consecutive monthly decline in the manufacturing economy. A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. Bretz added, "For the entire economy to indicate a decline, the PMI would have to fall below 44%, which it breached for the entire fourth quarter. The PMI has averaged 46.5% for all of 1990 which, based on past experience, is consistent with real GNP growth of approximately 0.8%. However, the average PMI for the final quarter of 1990 (41.7%) is indicative of a decline in real GNP."

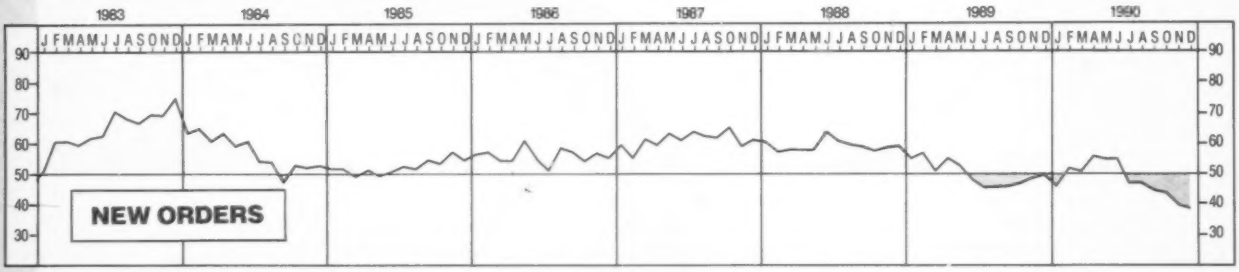
BUSINESS



Peak — July 1981; Trough — November 1982.

Production worsened in December marking the fifth successively steeper monthly decline. The Production Index fell to 40.4% from 41.8% in November and the lowest since August 1982 (39.9%) in the middle of the previous recession. There is only faint hope for any improvement in Production until New Orders improve.

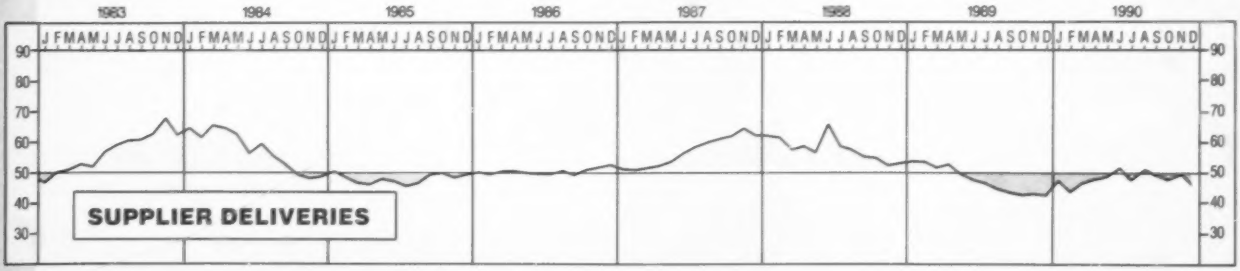
Production	%Better	%Same	%Worse	Net	Index
December 1990	12	53	35	–23	40.4
November 1990	16	49	35	–19	41.8
October 1990	17	52	31	–14	43.0
September 1990	23	48	29	– 6	45.1



Peak — July 1981; Trough — November 1982.

New Orders declined in December for the sixth consecutive month. The New Orders Index fell to 38.3%, down from 39.4% in November and its lowest since May 1982 (38.1%) during the previous recessior.. This engine of the economy must reverse direction before the economy ends its decline.

New Orders	%Better	%Same	%Worse	Net	Index
December 1990	15	40	45	–30	38.3
November 1990	18	39	43	–25	39.4
October 1990	19	47	34	–15	43.8
September 1990	23	47	30	– 7	44.5



Peak — July 1981; Trough — November 1982.

The Supplier Deliveries Index fell in December to 45.9% from 49.6% in November. This marked the fourth consecutive month below 50% and generally indicated suppliers are having less difficulty meeting their requested delivery dates.

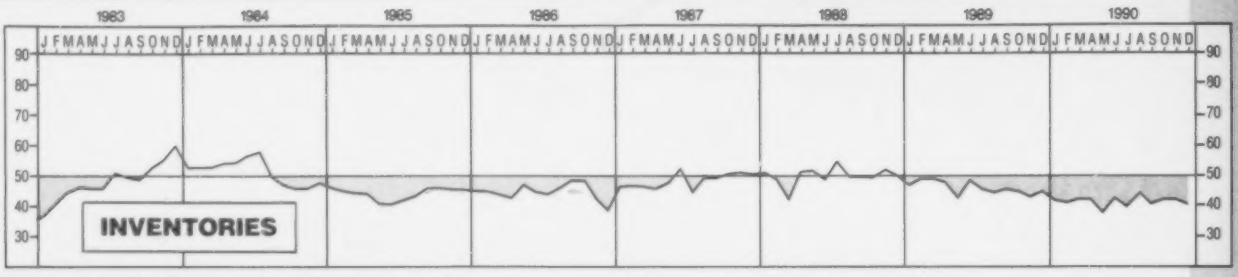
Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
December 1990	5	83	12	– 7	45.9
November 1990	9	80	11	– 2	49.6
October 1990	9	79	12	– 3	47.8
September 1990	7	85	8	– 1	49.4

IN SHORT SUPPLY

Acetate Filter — 3rd consecutive month; **Bearings** — 29th consecutive month; **Castings** — 4th consecutive month; **Acetonitrile** — Used to remove tars, phenols, and coloring matter from certain petroleum hydrocarbons, and to extract fatty acids from animal and vegetable oils; **Caustic Soda/Soda Ash** — 43rd consecutive month (used heavily in paper-making, petroleum refining, and soap-making); **Methyl Ethyl Ketone (MEK)** — 4th consecutive month (used heavily as a chemical solvent in surface coatings, and making resins); **Phthalic anhydride** — Used heavily in making artificial resins, benzoic acid, and phthalates; **Propylene** — 3rd consecutive month (used heavily in making polypropylene plastic and acetone, isopropyl alcohol, phenol, propylene oxide, and other chemicals); **Propylene Glycol** — 2nd consecutive month (used as a nontoxic antifreeze, a solvent for pharmaceuticals, a substitute for ethylene glycol, an emulsifier in foods, and in making synthetic resins); **Propylene Oxide** — 2nd consecutive month (used heavily in preparation of polyethers to form polyurethanes, propylene and dipropylene glycols, lubricants, surfactants, and oil demulsifiers); **Textile Dyes** — 2nd consecutive month; **Timber**.

UP IN PRICE

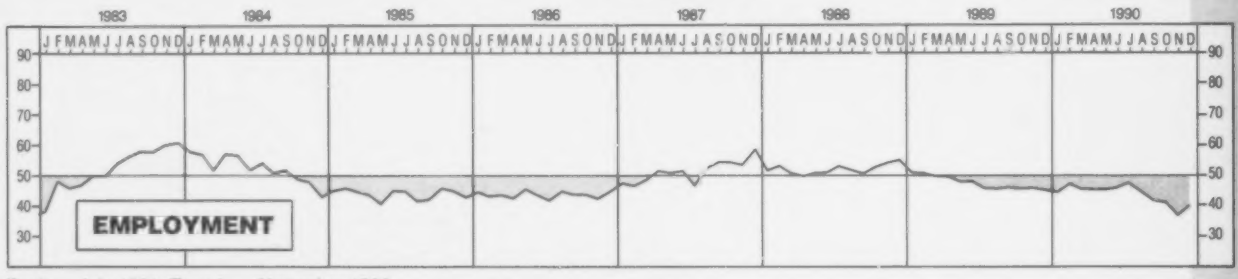
Magnet Wire; Ammonium Nitrate — Used in fertilizers, matches, pyrotechnics, safety explosives, and in making nitrous oxide; **Caustic Soda/Soda Ash** — 49th consecutive month, primarily as a consequence of lower demand for coproduced chlorine by paper makers; **Ethylene** — 4th consecutive month, (used heavily in making ethylene oxide, plastic resins, and glycols); **Industrial Gases; Methanol** — 2nd consecutive month, (used heavily as a solvent, a motor fuel additive, and in synthesizing other chemicals); **Methyl Ethyl Ketone (MEK)** — 4th consecutive month; **Solvents** — 5th consecutive month; **Sulfur** — 4th consecutive month (used heavily in making sulfuric acid, matches, gunpowder, in bleaching wood pulp, and a variety of industrial uses); **Textile Dyes; Plastic Resins** — 4th consecutive month; **Plastic Products; Polyethylene** — 4th consecutive month (used heavily in making plastic packaging materials, kitchenware, tank and pipe linings, paper coatings, and textile stiffeners); **Polypropylene** — 4th consecutive month (used heavily in making plastic fabric, yarns, carpets, and packaging materials); **Propylene** — 5th consecutive month (used heavily in making polypropylene plastic and acetone, isopropyl alcohol,



Peak — July 1981; Trough — November 1982.

Inventories declined in December for the 25th consecutive month, keeping pace with the decline in Production and reducing the possibility of excessive inventories. The Inventories Index fell to 40.3%, down from 42.3% in November and the lowest since July (39.3%).

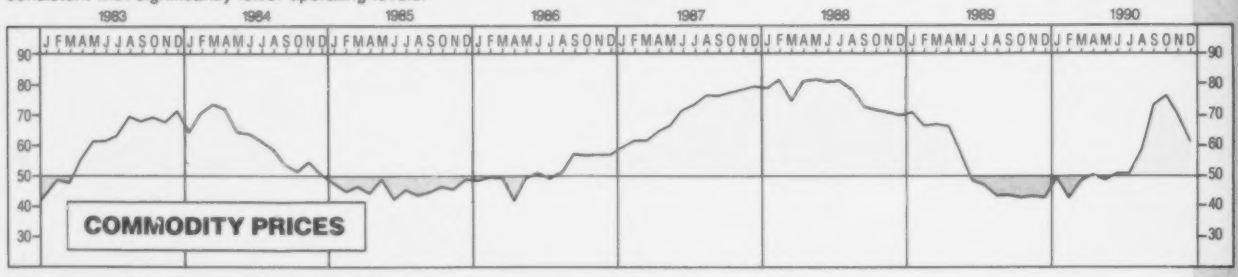
Inventories	%Higher	%Same	%Lower	Net	Index
December 1990	15	47	38	–23	40.3
November 1990	12	54	34	–22	42.3
October 1990	14	53	33	–19	42.0
September 1990	12	59	29	–17	40.8



Peak — July 1981; Trough — November 1982.

Employment declined in December for the 22nd consecutive month. The Employment Index rose to 39.5% from 36.7% in November, which was the lowest since December 1982 (36.3%). Members continued to report layoffs, plant closings, and consolidations along with hiring freezes and voluntary early-retirement programs to reduce employment consistent with significantly lower operating levels.

Employment	%Higher	%Same	%Lower	Net	Index
December 1990	7	61	32	–25	39.5
November 1990	5	62	33	–28	36.7
October 1990	9	63	28	–19	40.7
September 1990	8	65	27	–19	41.5



Peak — July 1981; Trough — November 1982.

Although Prices rose in December for the seventh consecutive month, the rate of increase dropped sharply for the second month in a row. The Price Index fell to 61.2%, down from 68.7% last month. As the peak of inflation stemming from the invasion of Kuwait appears to be over, a trend toward lower inflation should continue.

Prices	%Higher	%Same	%Lower	Net	Index
December 1990	32	55	13	+19	61.2
November 1990	44	46	10	+34	68.7
October 1990	56	38	6	+50	76.4
September 1990	50	44	6	+44	73.4

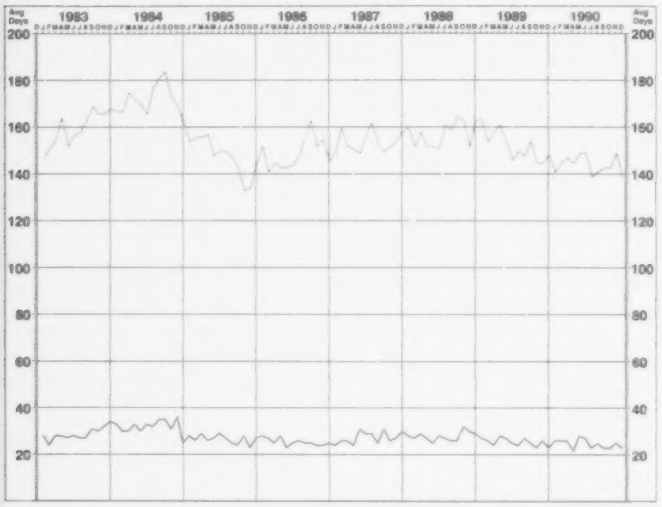
phenol, propylene oxide, and other chemicals); **Leather; Rosin** — Used in making varnish, varnish and paint dryers, inks, soap, waxes, polishes, floor coverings, paper, plastic, and sizing; **Adhesives** — 2nd consecutive month; **Lumber** — After being reported down in price in November for 6th consecutive month; **Paint** — 3rd consecutive month; **Diesel Fuel** — 5th consecutive month; **Gasoline** — 5th consecutive month; **Fuel Oil** — 5th consecutive month, some reports of price decreases; **Lubricants** — 3rd consecutive month; **Natural Gas** — 3rd consecutive month; **Petrochemicals** — 4th consecutive month; **Petroleum Products** — 5th consecutive month; **Apple Juice; Beef; Peanuts** — 4th time in 5 months; **Transportation Charges** — 4th consecutive month.

DOWN IN PRICE

Aluminum — 2nd consecutive month; **Brass** — 2nd consecutive month; **Copper** — 2nd consecutive month, after being reported up in price in October for 7th consecutive month; **Nickel** — 2nd consecutive month (used heavily in making stainless steel, plating metals, and batteries); **Steel** — Some reports of price increases; **Steel Scrap** — 2nd consecutive month; **Alloy Metals; Zinc** — 5th consecutive month; **Bearings** — 2nd consecutive month, after being reported up in price in August for the 23rd time in 26 months; **Containerboard; Wood Pulp** — 2nd consecutive month; **Cotton Yarn; Benzene** — Used heavily in making medicinal chemicals, dyes, varnishes, lacquers, and resins; **Chlorine** — Used heavily in bleaching paper and fabrics, purifying water and in making synthetic rubber, plastics, and other chemicals; **Phenol** — Used heavily in making phenolic resins; **Titanium dioxide** — 2nd consecutive month (a lead-free pigment used as a whitener in coatings, paints, paper, and other industrial applications); **Styrene** — Used chiefly in making polystyrene, synthetic rubber, latex, polyester resins, and plastic products such as dinnerware, paneling, boat hulls; **Toluene** — Used heavily in making explosives, dyes, and benzoic acid, as a solvent in paint and as a gasoline additive; **Xylene** — Used heavily in making benzoic acid, phthalic anhydride, polyester fibers, and dyes; **Connectors; DRAMS** — 7th consecutive month; **Memory Circuits; Printed Circuit Boards; High Fructose Corn Syrup** — 2nd consecutive month; **Milk; Orange Juice; Soybean Oil; Sugar** — 5th consecutive month; **Turkey Meat**.

BUYING POLICY

Leadtimes for Capital Expenditures and Maintenance, Repair, and Operating (MRO) Supplies declined in December but lengthened for Production Materials. The average leadtimes for Capital Expenditures decreased significantly to 139 days in December, down from 149 days last month and along with July 1990, is the least since November 1985 (134 days). This is consistent with the cutbacks in Capital Expenditures reported by purchasers in their latest semiannual forecast. The average leadtimes for Production Materials lengthened in December to 47 days, up from 45 days last month. The average leadtimes for Maintenance, Repair, and Operating (MRO) Supplies decreased to 23 days, down from 25 days in November but identical to September and October.

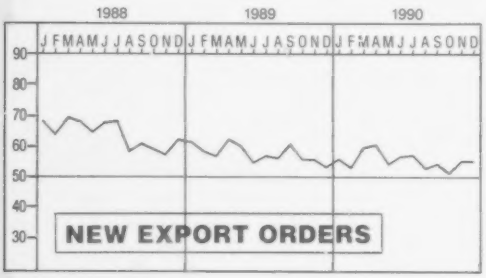


PERCENT REPORTING

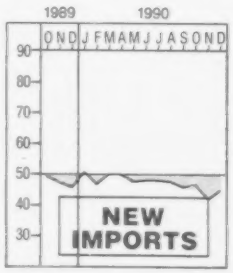
Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
December	13	7	10	23	33	14	139
November	11	7	13	18	34	17	149
October	12	7	12	24	28	17	143
September	12	8	12	19	34	15	143

Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
December	21	43	22	10	2	2	47
November	18	44	26	9	2	1	45
October	20	39	26	12	2	1	46
September	19	42	24	12	2	1	46

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
December	46	43	8	3	0	0	23
November	43	45	8	3	1	0	25
October	46	41	10	3	0	0	23
September	42	48	7	3	0	0	23



New Export Orders increased in December marking the third consecutive year of growth. The New Export Orders Index, not yet seasonally adjusted, remained at 55.0%, the same as in November and very close to the average for the year (55.3%). The percentage of members exporting was 74% in December, the same as the year average (74%).



Imports declined in December for the eighth consecutive month. The Imports Index, not seasonally adjusted, was 44.5%, up from 42.0% in November. This is still below the average for all of 1990 (47.2%). The percentage of members importing was 76%, the same as last month and just under the average for the entire year (77%).

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
December 1990	74	21	68	11	+10	55.0
November 1990	75	21	68	11	+10	55.0
October 1990	74	18	66	16	+ 2	51.0
September 1990	76	20	68	12	+ 8	54.0

Imports	%Importing	%Higher	%Same	%Lower	Net	Index
December 1990	76	8	73	19	−11	44.5
November 1990	76	6	72	22	−16	42.0
October 1990	75	10	73	17	− 7	46.5
September 1990	81	5	81	14	− 9	45.5

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured [New Orders, New Export Orders, Imports, Production, Supplier Deliveries (formerly Vendor Deliveries), Inventories, Employment and Prices], this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

Responses to Buying Policy reflect the percent reporting the current months lead time, the approximate weighted number of days ahead for which commitments are made for Production Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.

A 6910-1

Report On Business®

Economic Decline Worsens; PMI Falls to 37.7% While the Price Index Plummets to 49.1%

JANUARY REPORT

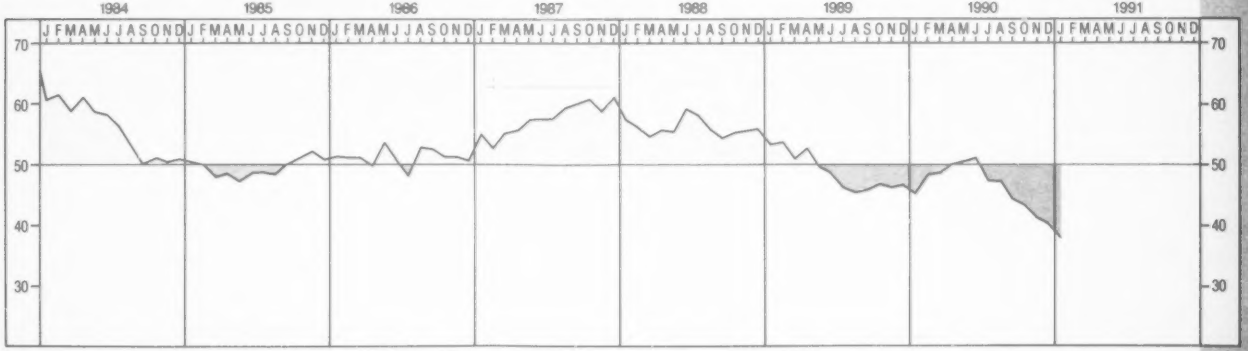
Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of corporate purchasing, Pitney Bowes, Inc.

The U.S. economic decline worsened in January 1991 for the fourth consecutive month, say the nation's purchasing executives in their latest **Report on Business**. The manufacturing sector of the economy registered the eighth consecutive monthly decline. The Production Index declined sharply for the sixth consecutive month and is the lowest since November 1981. The New Orders Index declined further in January for the seventh consecutive month. It is also at the lowest level since November 1981, the fourth month after the previous recession began in July 1981.

The Supplier Deliveries Index declined for the fifth consecutive month, once again reflecting a diminishing demand for products and the relative ease in obtaining them as requested. Inventories declined for the 26th consecutive month, virtually in lock step with declining sales. The Employment Index declined for the 24th consecutive month and is the lowest since December 1982. Prices declined in January after seven consecutive months of increases, confirming purchasers' early November 1990 signal that the Middle East crisis-related inflation peaked in October 1990. New Export Orders continued to grow in January at the strongest rate since July 1990, while Imports declined for the ninth consecutive month at a slightly greater rate than in December 1990.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of corporate purchasing at Pitney Bowes, Inc. Said Bretz, "The economy marked the new year by registering a worsening decline in the recession. All indicators confirmed the anemic condition of the economy, except for the continued strength in New Export Orders. The good news is the low level of inventories and the break in inflationary price increases. The sobering reality is that New Orders has yet to bottom, let alone lead the way toward recovery, and until it does, we can expect no improvement in the economic malaise."

PURCHASING MANAGERS' INDEX

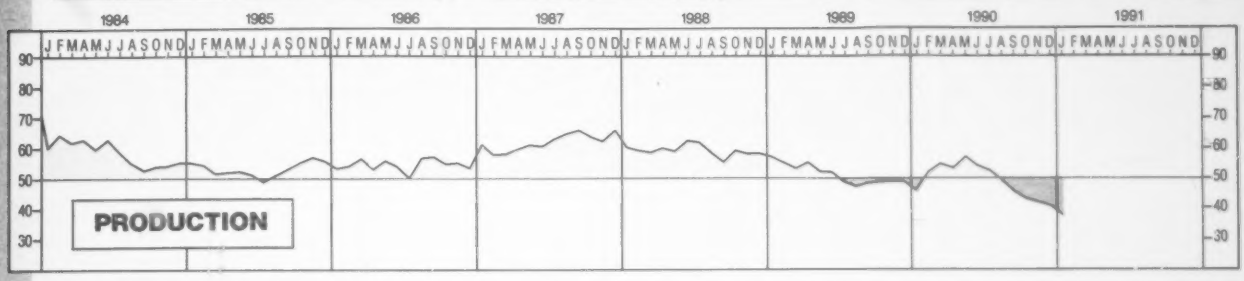


PURCHASING MANAGERS' INDEX (PMI)

January '90	45.5	August '90	47.4
February '90	48.1	September '90	44.9
March '90	49.0	October '90	43.6
April '90	49.4	November '90	41.6
May '90	50.1	December '90	40.5
June '90	49.9	January '91	37.7
July '90	47.6		

The Purchasing Managers' Index (PMI) fell to 37.7% in January, down significantly from 40.5% in December, and is the lowest level since May 1982 (35.5%). Both numbers reflect an update of the seasonal adjustment factors by the U.S. Department of Commerce used to calculate the Purchasing Managers' Index as well as the diffusion indexes for all other indicators included in the January ***Report on Business***. The New Export Orders Index and the Imports Index are an exception from the update because both indexes are not yet seasonally adjusted. A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. Bretz added, "The PMI has registered under 44%, indicative of a decline in the entire economy, for four consecutive months. The January PMI of 37.7% is approximately the level the PMI reached in the fifth month (December 1981) after the previous recession."

BUSINESS

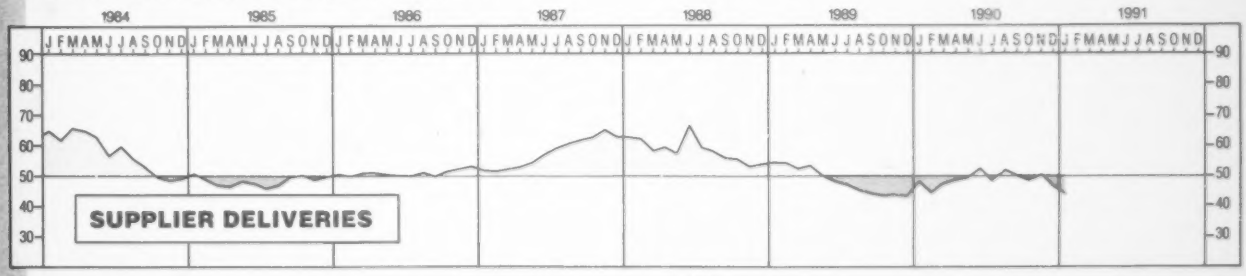


Production weakened in January registering the sixth successively steeper monthly decline. The Production Index dropped to 37.1%, a significant decline from 41.0% in December 1990 and 55.2% in May 1990, which was the highest level in 1990 before the index began falling. There is little chance for improvement in Production until New Orders pick up.

Production	%Better	%Same	%Worse	Net	Index
January 1991	14	47	39	-25	37.1
December 1990	12	53	35	-23	41.0
November 1990	16	49	35	-19	42.3
October 1990	17	52	31	-14	43.6

New Orders declined in January for the seventh consecutive month. The New Orders Index fell to 35.7%, down significantly from 38.5% in December. The 35.7% is the lowest level this index has been since November 1981 (32.8%) which was the fourth month after the previous recession began in July 1981. The economy will continue to weaken until New Orders bottoms and begins to turn upward.

New Orders	%Better	%Same	%Worse	Net	Index
January 1991	15	44	41	-26	35.7
December 1990	15	40	45	-30	38.5
November 1990	18	39	43	-25	40.0
October 1990	19	47	34	-15	43.6



The Supplier Deliveries Index fell to 43.3% in January, down from 46.8% last month. This drop in the index reflects the end of the period when prices were increasing rapidly and purchasers were requesting earlier deliveries to defer the increase as long as possible. Now, with price increases actually declining, as well as demand for products, suppliers' ability to deliver on time has improved significantly.

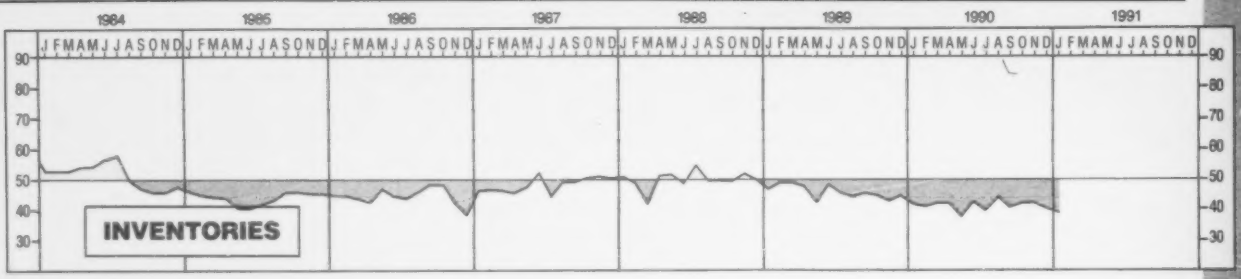
Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
January 1991	4	80	16	-12	43.3
December 1990	5	83	12	- 7	46.8
November 1990	9	80	11	- 2	49.9
October 1990	9	79	12	- 3	48.7

IN SHORT SUPPLY

Acetate Filter — 4th consecutive month; **Bearings** —30th consecutive month; **Castings** — 5th consecutive month; **Caustic Soda/Soda Ash** — 44th consecutive month (used heavily in paper making, petroleum refining, and soap making); **Methyl Ethyl Ketone (MEK)** — 5th consecutive month (used heavily as a chemical solvent in surface coatings, and making resins); **Propylene Oxide** — 3rd consecutive month (used heavily in preparation of polyethers to form polyurethanes, propylene and dipropylene glycols, lubricants, surfactants, and oil demulsifiers); **Textile Dyes** — 3rd consecutive month; **Clay-coated Newsback Board** — Used in packaging.

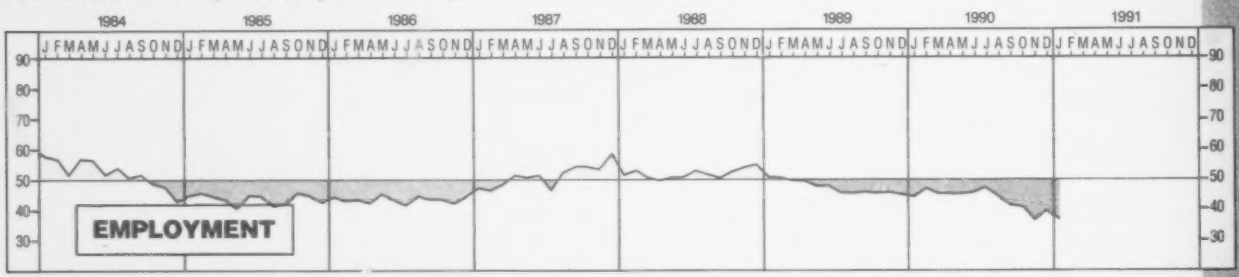
UP IN PRICE

Steel — Some reports of price decreases; **Acetic Acid** — Used in making various acetates, plastics and rubber tanning, a preservative in foods and a solvent for gums, resins, and volatile oils; **Caustic Soda/Soda Ash** — 50th consecutive month, primarily as a consequence of lower demand for coproduced chlorine by paper makers; **Methyl Ethyl Ketone (MEK)** — 5th consecutive month; **Sulfur** — 5th consecutive month (used heavily in making sulfuric acid, matches, gunpowder, in bleaching wood pulp, and a variety of industrial uses); **Pigments** — Used heavily in imparting color to coating materials such as paints, inks, plastics, and rubber; **Textile Dyes** — 2nd consecutive month; **Cotton Fabric; Vinyl Fabric; Plastic Resins** — 5th consecutive month, (used in making plastic products); **Plastic Products** — 2nd consecutive month; **Plastic Shrink Wrap** — Used heavily in packaging consumer and industrial products; **Polyethylene** — 5th consecutive month (used heavily in making plastic packaging materials, kitchenware, tank and pipe linings, paper coatings, and textile stiffeners); **Rubber and Rubber Products; Urethane** — Used as an alternative to rubber in selected applications in aircraft and office equipment; **Adhesives** —3rd consecutive month; **Cigarette Paper; Glass; Silica Sands** — Used heavily in making glass; **Silicon, Substrate and Dust** —Used heavily in making transistors, diodes, and semiconductors; **Petrochemicals** — 5th consecutive month.



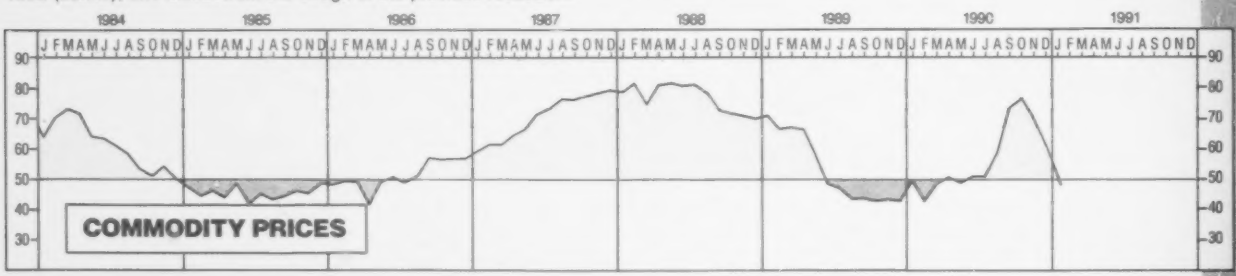
Inventories declined in January for the 26th consecutive month. The Inventories Index fell to 38.6%, down from 39.7% in December 1990 and is the lowest level since December 1986 (38.4%). Obviously, purchasers are working to reduce their inventories by at least the measure of their decline in sales, and avoiding what would otherwise be an excessive inventory and a delay of the recovery.

Inventories	%Higher	%Same	%Lower	Net	Index
January 1991	15	47	38	–23	38.6
December 1990	15	47	38	–23	39.7
November 1990	12	54	34	–22	41.3
October 1990	14	53	33	–19	41.5



Employment continued to decline in January for the 24th consecutive month. The Employment Index fell to 36.5%, down from 38.7% last month, and a reflection of the increased number of layoffs and plant closings along with hiring freezes, in anticipation of declining sales and production. The 36.5% index in January is the lowest since December 1982 (36.3%), one month from the trough of the previous recession.

Employment	%Higher	%Same	%Lower	Net	Index
January 1991	7	57	36	–29	36.5
December 1990	7	61	32	–25	38.7
November 1990	5	62	33	–28	37.2
October 1990	9	63	28	–19	40.7



Price increases declined slightly to 49.1%, a sharp drop from 61.2% in December. Almost all of the previous seven months of price increases were caused not by shortages nor increases in demand, but on speculation based on the fear of supply interruptions. These fears appeared to diminish causing price increases to peak in October. With the economy continuing to weaken, overall prices will also continue to weaken.

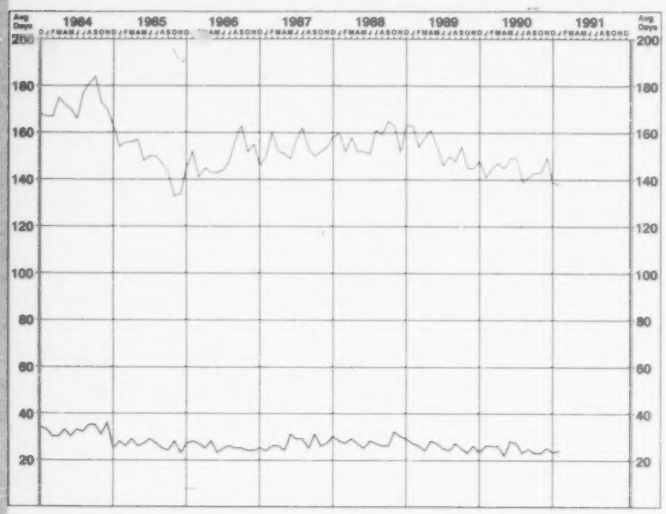
Prices	%Higher	%Same	%Lower	Net	Index
January 1991	25	54	21	+ 4	49.1
December 1990	32	55	13	+19	61.2
November 1990	44	46	10	+34	69.5
October 1990	56	38	6	+50	77.3

DOWN IN PRICE

Aluminum —3rd consecutive month; **Brass** —3rd consecutive month; **Copper** — 3rd consecutive month; **Nickel** —3rd consecutive month (used heavily in making stainless steel, plating metals, and batteries); **Steel Scrap** — 3rd consecutive month; **Zinc** — 6th consecutive month; **Stainless Steel; Steel Plates; Bearings** — 3rd consecutive month, after being reported up in price in August 1990 for the 23rd time in 26 months; **Uncoated Offset Paper** — Used heavily in printing; **Corrugated Shipping Containers** — 11th time in 12 months; **Leather; Lumber; Glycerine** — Used in various ways especially as a sweetener in confectioneries, cosmetics, soaps, and tobacco; **Hydrogen Peroxide** — Increasing supply exceeding demand because of switching from chlorine use by paper makers to avoid dioxins; used as a bleaching agent and, in solution, as a topical cleansing agent and antiseptic; **Phenol** — 2nd consecutive month (used heavily in making phenolic resins); **Polypropylene** — Used heavily in making plastic fabric, yarns, carpets, and packaging materials; **Solvents; Sulfuric Acid** — Used heavily in making fertilizers, dyes, adhesives, and other acids; **Styrene** —2nd consecutive month (used chiefly in making polystyrene, synthetic rubber, latex, polyester resins, and plastic products); **Toluene** — 2nd consecutive month (used heavily in making explosives, dyes, and benzoic acid, as a solvent in paint and as a gasoline additive); **Xylene** — 2nd consecutive month (used heavily in making benzoic acid, phthalic anhydride, polyester fibers, and dyes); **Zinc Oxide** — 3rd time in 5 months (used heavily as a pigmentation in paints and inks, in cosmetics, driers, quick-setting cement, and copier paper); **Coke** — A residue of coal used as fuel; **Diesel Fuel** — After being reported up in price in December for 5th consecutive month; **Gasoline** — After being reported up in price in December for 5th consecutive month; **Natural Gas** — After being reported up in price in December; **Propane; Petroleum Products** — After being reported up in price in December for 5th consecutive month; **Connectors** — 2nd consecutive month; **Printed Circuit Boards** — 2nd consecutive month; **Semiconductors** — 2nd consecutive month; **High Fructose Corn Syrup** — 3rd consecutive month; **Sugar** — 6th consecutive month.

BUYING POLICY

Leadtimes for Capital Expenditures and Production Materials declined in January, mirroring the reduced purchases in both categories. The average leadtimes for Capital Expenditures decreased to 138 days, down slightly from 139 days last month and significantly less than 149 days in November 1990. The 138 days is the lowest since November 1985 (134 days). The average leadtimes for Production Materials shortened to 45 days in January, down from 47 days in December 1990 and the same as in November 1990. However, the average leadtimes for Maintenance, Repair, and Operating (MRO) Supplies lengthened slightly to 24 days, up from 23 days in December 1990, and about the average for the past four months.

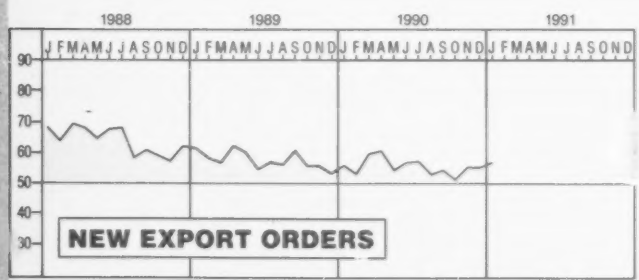


PERCENT REPORTING

Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
January	12	7	14	21	32	14	138
December	13	7	10	23	33	14	139
November	11	7	13	18	34	17	149
October	12	7	12	24	28	17	143

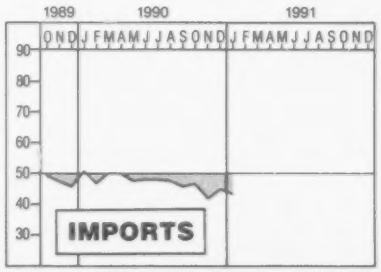
Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
January	20	39	26	11	1	1	45
December	21	43	22	10	2	2	47
November	18	44	26	9	2	1	45
October	20	39	26	12	2	1	46

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
January	45	43	9	2	1	0	24
December	46	43	8	3	0	0	23
November	43	45	8	3	1	0	25
October	46	41	10	3	0	0	23



New Export Orders grew again in January beginning the fourth year of continuous growth. The New Export Orders Index, not yet seasonally adjusted, increased to 56.5% in January, up from 55.0% in both November and December. The percentage of members exporting was 75% in January, up slightly from 74% in December 1990.

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
January 1991	75	25	63	12	+13	56.5
December 1990	74	21	68	11	+10	55.0
November 1990	75	21	68	11	+10	55.0
October 1990	74	18	66	16	+ 2	51.0



Imports declined in January for the ninth consecutive month and at a slightly greater rate than in December. The Imports Index, not seasonally adjusted, dropped to 43.0%, down from 44.5% in December and notably lower than the average for all of 1990 (47.2%). However, the percentage of members importing increased to 79%, up from 76% in both November and December 1990.

Imports	%Importing	%Higher	%Same	%Lower	Net	Index
January 1991	79	9	68	23	–14	43.0
December 1990	76	8	73	19	–11	44.5
November 1990	76	6	72	22	–16	42.0
October 1990	75	10	73	17	– 7	46.5

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured [New Orders, New Export Orders, Imports, Production, Supplier Deliveries, Inventories, Employment and Prices], this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

Responses to Buying Policy reflect the percent reporting the current months lead time, the approximate weighted number of days ahead for which commitments are made for Production Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.

AG970-1

Economic Decline Slows; PMI Rises to 38.5%; Price Index Tumbles to 49.1%

FEBRUARY REPORT

Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of corporate purchasing, Pitney Bowes, Inc.

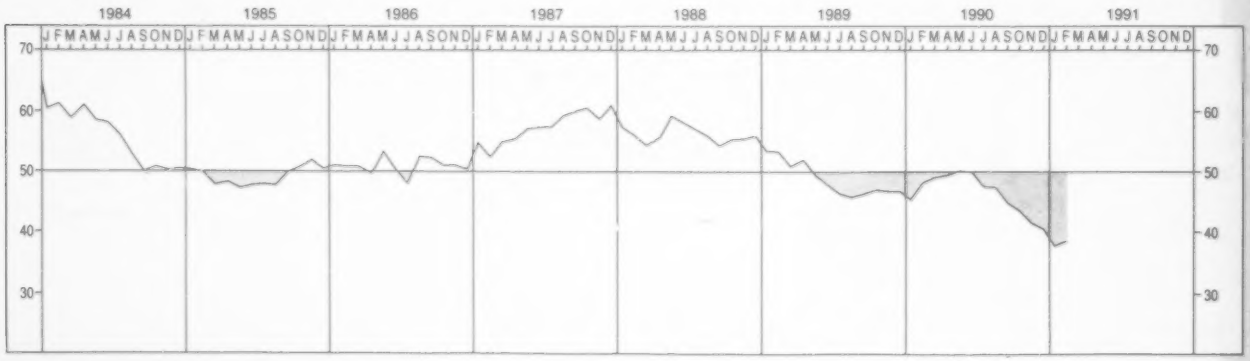
The U.S. economic decline continued in February 1991 for the fifth consecutive month, although the rate of the decline lessened for the first time since July 1990, say the nation's purchasing executives in their latest **Report on Business**. The Production Index declined for the seventh consecutive month, although at a lesser rate than in January 1991. The New Orders Index, although declining for the eighth consecutive month in February, reversed direction and ended a string of nine successively lower months.

The Supplier Deliveries Index registered the same rate of decline in February as in January, perhaps signalling a slowing in the diminishing demand trend of past months. Inventories declined in February for the 27th consecutive month, although at a slightly lesser rate than in January. The Employment Index, a lagging indictor, declined in February for the 25th consecutive month, and is the lowest since November 1982. The Price Index registered the second consecutive downward plunge in February after seven consecutive months of increases, caused primarily by the fear of shortages of oil-related products. New Export Orders continued to grow in February, although the rate of growth slowed. Imports declined for the tenth consecutive month in February, at a lesser rate than the previous three months.

In a series of special questions, purchasing executives, on average, indicated they expect the recession to end in the first half of September 1991. Again, on average, they expect the situation in the Middle East to be resolved to the point where it is not a significant factor in decision making by July 1, 1991. Only 12% of purchasers reported deferring some purchases as a result of the war in the Middle East. Over 60% cited capital expenditures as the category of purchase being deferred.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of corporate purchasing at Pitney Bowes, Inc. Said Bretz, "Although the economy is still in a decline, there are encouraging signs in February's **Report** that we may have reached the bottom of the declining trend. The New Orders Index did not decline and actually rose somewhat, while the Supplier Deliveries Index was identical to January's level and Inventory levels remained relatively low. Perhaps most encouraging is the significant reduction in the rate of price increases. Overall, the light at the end of the tunnel may still be very dim, but it may very well be signalling that the worst is now behind us."

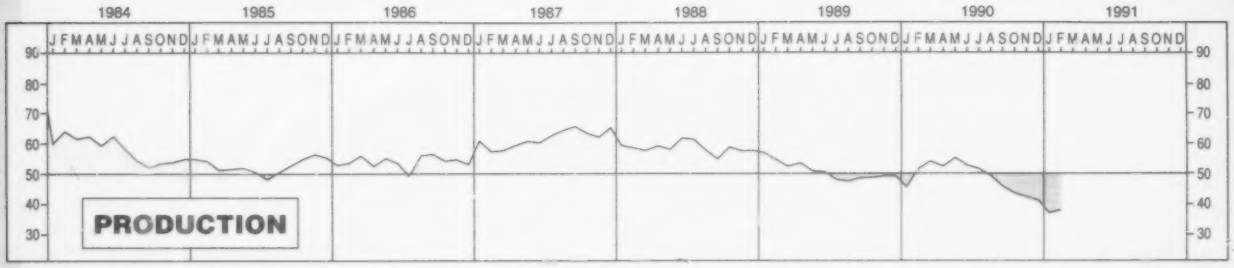
PURCHASING MANAGERS' INDEX



PURCHASING MANAGERS' INDEX (PMI)

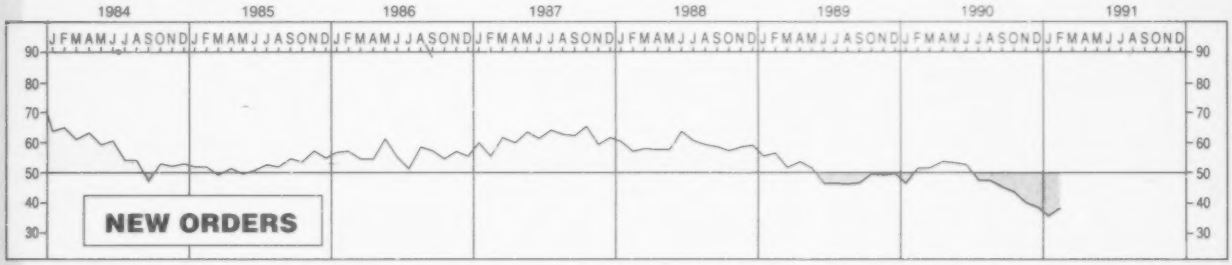
February '90	48.1	September '90	44.9
March '90	49.0	October '90	43.6
April '90	49.4	November '90	41.6
May '90	50.1	December '90	40.5
June '90	49.9	January '91	37.7
July '90	47.6	February '91	38.5
August '90	47.4		

The Purchasing Managers' Index (PMI) rose to 38.5% in February, up from 37.7% in January. Although the 38.5% marks the ninth consecutive month below 50%, it is also the first time since May 1990 that the PMI has not fallen lower than the previous month. A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. Bretz added, "February is the fifth consecutive month that the PMI has registered less than 44%, generally indicative of a decline in the entire economy. The February PMI of 38.5% is approximately the level the PMI reached in the sixth month (January 1982) after the previous recession began."



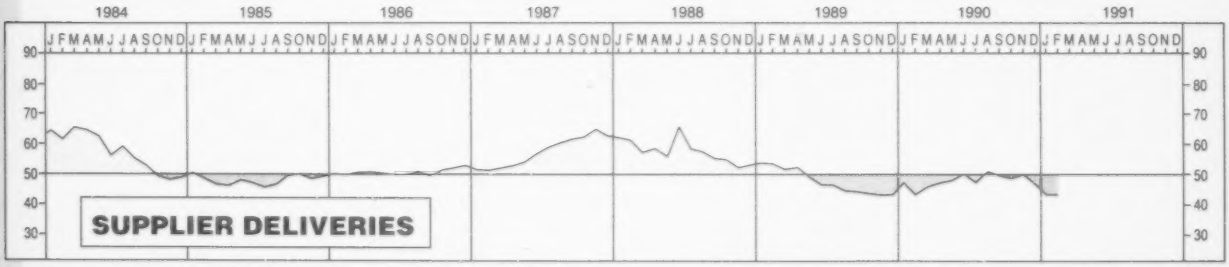
Production declined in February for the seventh consecutive monthly. Although still declining, the Production Index registered a significant change in the direction of the decline. The Production Index rose a point to 38.1% in February, up from 37.1% in January. Hopefully, the similar reversal in the downward trend of New Orders will result in future improvement in the weak production levels.

Production	%Better	%Same	%Worse	Net	Index
February 1991	15	49	36	–21	38.1
January 1991	14	47	39	–25	37.1
December 1990	12	53	35	–23	41.0
November 1990	16	49	35	–19	42.3



New Orders declined in February for the eighth consecutive month. However, February's New Orders Index registered a healthy rise to 38.3% from 35.7% in January. Though still too soon to be certain, February might be the bottom of the current economic cycle, and the beginning of an upward trend.

New Orders	%Better	%Same	%Worse	Net	Index
February 1991	17	45	38	–21	38.3
January 1991	15	44	41	–26	35.7
December 1990	15	40	45	–30	38.5
November 1990	18	39	43	–25	40.0



The Supplier Deliveries Index declined in February for the sixth consecutive month. Supplier Deliveries registered 43.3%, identical to January's Index. Although too early to be certain, the January/February Indexes may have formed a bottom in the downward trend.

Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
February 1991	4	78	18	–14	43.3
January 1991	4	80	16	–12	43.3
December 1990	5	83	12	– 7	46.8
November 1990	9	80	11	– 2	49.9

IN SHORT SUPPLY

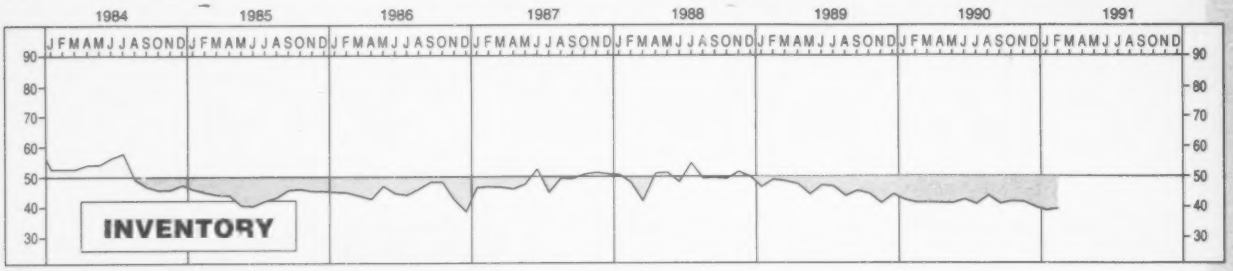
Bearings — 31st consecutive month; **Steel Castings** — 6th consecutive month; **Caustic Soda/Soda Ash** — 45th consecutive month (used heavily in paper making, petroleum refining, and soap making); **Methyl Ethyl Ketone (MEK)** — 6th consecutive month (used heavily as a chemical solvent in surface coatings, and making resins); **Titanium Dioxide** — A lead-free pigment used as a whitener in coatings, paints, paper, and other industrial applications; **Solid Bleached Sulfate (SBS) Paperboard; DRAMS.**

UP IN PRICE

Steel — Equal reports of price decreases; **Steel Castings; Engines; Electric Motors; Acetic Acid** — 2nd consecutive month (used in making various acetates, plastics and rubber tanning, a preservative in foods and a solvent for gums, resins, and volatile oils); **Caustic Soda/Soda Ash** — 51st consecutive month (used heavily in paper making, petroleum refining, and soap making); **Ethyl Acetate** — Used heavily in pharmaceuticals as a flavor and in artificial fruit essences; **Methanol; Methyl Ethyl Ketone (MEK)** — 6th consecutive month; **Methacrylic Acid** — Used in making methacrylate resins and plastics; **Textile Dyes** — 3rd consecutive month; **Cotton Fabric** — 2nd consecutive month; **Vinyl Fabric** — 2nd consecutive month; **Plastic Resins** — 6th consecutive month; **Plastic Products** — 3rd consecutive month; **Polyethylene** — 6th consecutive month (used heavily in making plastic packaging materials, kitchenware, tank and pipe linings, paper coatings, and textile stiffeners); **Polyvinyl Alcohol** — Used heavily in plastic molding compounds, surface coatings, textile sizes and finishing, in printing inks for plastic and glass, and pharmaceutical finishing; **Rubber and Rubber Products** — 2nd consecutive month; **Glass and Glass Bottles** — 2nd consecutive month; **Silica Sands** — 2nd consecutive month (used heavily in making glass); **Silicon, Substrate and Dust** — 2nd consecutive month (used heavily in making transistors, diodes, and semiconductors); **DRAMS** — Equal reports of price decreases; **Corn.**

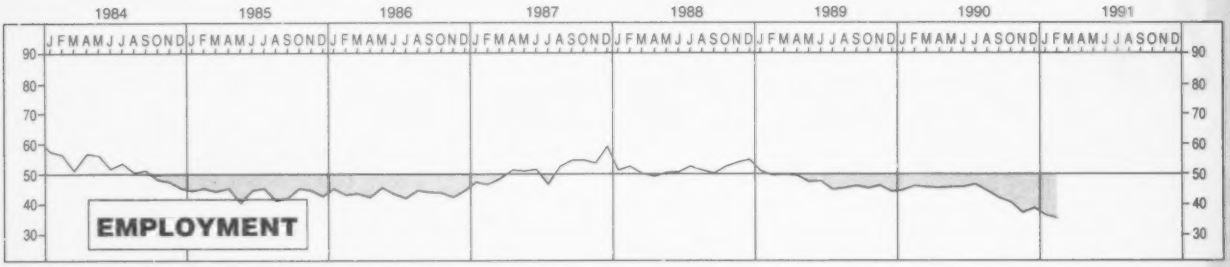
DOWN IN PRICE

Aluminum — 4th consecutive month; **Aluminum Castings; Brass** — 4th consecutive month; **Copper** — 4th consecutive month; **Magnesium; Nickel** — 4th



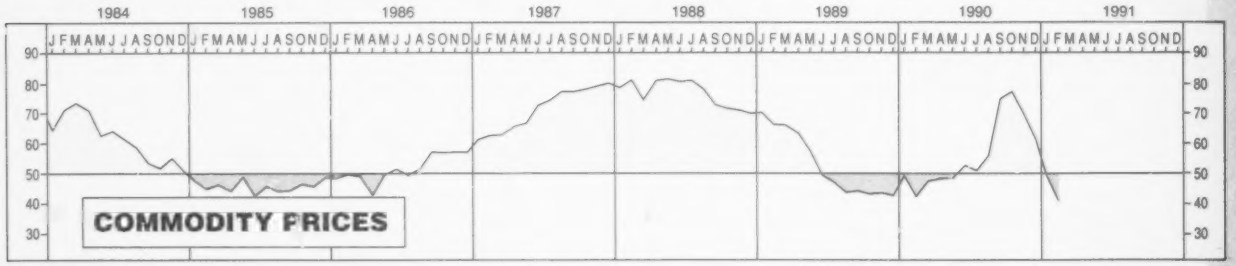
Inventories declined in February for the 27th consecutive month, although at a slightly lesser rate than in January 1991. The Inventories Index rose to 39.2%, up from 38.6% last month, but it is still at a very low level, considering the pace of the decline in production.

Inventories	%Higher	%Same	%Lower	Net	Index
February 1991	15	52	33	–18	39.2
January 1991	15	47	38	–23	38.6
December 1990	15	47	38	–23	39.7
November 1990	12	54	34	–22	41.3



Employment declined in February for the 25th consecutive month. The Employment Index fell to 35.4%, down from 36.5% last month, and the lowest since November 1982 (28.2%), the trough of the previous recession. A lagging indicator, Employment would not likely bottom out and turn upward until other leading indicators have established the change in direction.

Employment	%Higher	%Same	%Lower	Net	Index
February 1991	5	60	35	–30	35.4
January 1991	7	57	36	–29	36.5
December 1990	7	61	32	–25	38.7
November 1990	5	62	33	–28	37.2



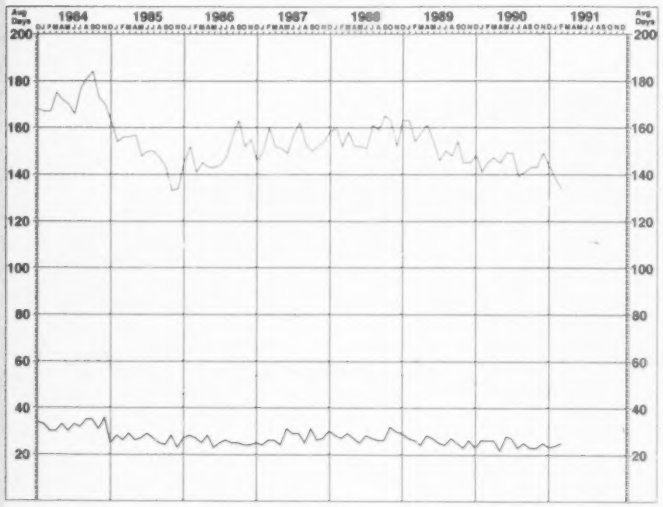
The Price Index registered 41.8% in February, down sharply from 49.1% in January, and the lowest since December 1982 (39.1%). The significant downward trend in inflation since October is very encouraging; with fears of supply interruption in oil-related products all but abated, this trend is likely to continue.

Prices	%Higher	%Same	%Lower	Net	Index
February 1991	12	60	28	–16	41.8
January 1991	25	54	21	+ 4	49.1
December 1990	32	55	13	+19	61.2
November 1990	44	46	10	+34	69.5

consecutive month; **Silver; Steel** — Equal reports of price increases; **Steel Scrap** — 4th consecutive month; **Zinc** — 7th consecutive month; **Stainless Steel** — 2nd consecutive month; **Stainless Steel Pipe; Bearings** — 4th consecutive month, after being reported up in price in August 1990 for the 23rd time in 26 months; **Uncoated Offset Paper** — 2nd consecutive month; **Corrugated Shipping Containers** — 12th time in 13 months; **Leather** — 2nd consecutive month; **Benzene** — Used heavily in making medicinal chemicals, dyes, varnishes, lacquers, and resins; **Citric Acid** — Used heavily in beverages, jellies, jams, candies, confectioneries, and in food processing; **Ethylene** — Used heavily in making ethylene oxide, plastic resins, and glycols; **Glycerine** — 2nd consecutive month (used in various ways especially as a sweetener); **Phthalic Anhydride** — Used heavily in making artificial resins, benzoic acid, and phthalates; **Polypropylene** — 2nd consecutive month (used heavily in making plastic fabric, yarns, carpets, and packaging materials); **Polystyrene**; **Propylene** — Used heavily in making polypropylene plastic and acetone, isopropyl alcohol, phenol, propylene oxide, and other chemicals; **Solvents** — 2nd consecutive month; **Sulfuric Acid** — 2nd consecutive month (used heavily in making fertilizers, dyes, adhesives, and other acids); **Styrene** — 3rd consecutive month (used chiefly in making polystyrene, synthetic rubber, latex, polyester resins, and plastic products); **Titanium Dioxide**; **Toluene** — 3rd consecutive month (used heavily in making explosives, dyes, and benzoic acid, as a solvent in paint and as a gasoline additive); **Xylene** — 3rd consecutive month (used heavily in making benzoic acid, phthalic anhydride, polyester fibers, and dyes); **Zinc Oxide** — 4th time in 6 months (used heavily as a pigmentation in paints and inks, in cosmetics, driers, quick-setting cement, and copier paper); **Crude Oil; Diesel Fuel** — 2nd consecutive month; **Fuel Oil**; **Gasoline** — 2nd consecutive month; **Natural Gas** — 2nd consecutive month; **Propane** — 2nd consecutive month; **Petrochemicals; Connectors** — 3rd consecutive month (used heavily in automobiles, computers, and business and telecommunications equipment); **DRAMS**; **Printed Circuit Boards** — 3rd consecutive month; **Microprocessors; Corn Starch** — Used in both food processing and papermaking; **High Fructose Corn Syrup** — 4th consecutive month; **Sugar** — 7th consecutive month; **Soybean Oil**; **Transportation Charges.**

BUYING POLICY

Leadtimes for Capital Expenditures declined in February for the 4th consecutive month, reflecting the decreased demand which normally lags the onset of a recession. The average leadtimes for Capital Expenditures fell to 134 days, down from 138 days in January and from 149 days as recently as November 1990. The 134 days is the lowest since November 1985 (also 134 days). Leadtimes for Production Materials in February lengthened to 48 days, up from 45 days last month, but only one day higher than in December 1990 (47 days). The average leadtimes for Maintenance, Repair, and Operating (MRO) Supplies also increased slightly in February to 25 days, up from 24 days in January, but the same as in November 1990.

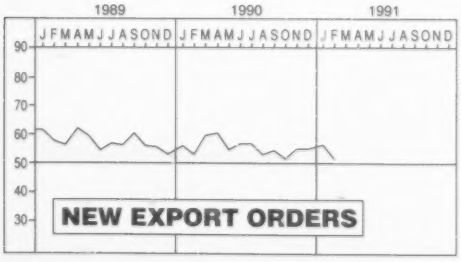


PERCENT REPORTING

Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
February	12	8	13	21	34	12	134
January	12	7	14	21	32	14	138
December	13	7	10	23	33	14	139
November	11	7	13	18	34	17	149

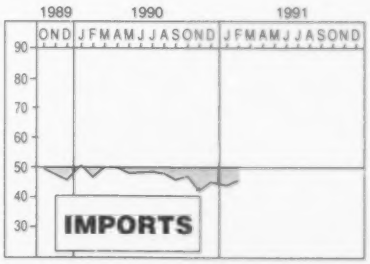
Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
February	21	40	25	10	2	2	48
January	20	39	28	11	1	1	45
December	21	43	22	10	2	2	47
November	18	44	26	9	2	1	45

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
February	41	45	12	2	0	0	25
January	45	43	9	2	1	0	24
December	46	43	8	3	0	0	23
November	43	45	8	3	1	0	25



New Export Orders continued to increase in February, although not at the same fast pace of the three previous months. The New Export Orders Index, not yet seasonally adjusted, fell to 52.0%, down from 56.5% in January. However, the percentage of members exporting rose to 77% in February, up from 75% last month and the 74% average for all of 1990.

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
February 1991	77	19	66	15	+ 4	52.0
January 1991	75	25	63	12	+13	56.5
December 1990	74	21	68	11	+10	55.0
November 1990	75	21	68	11	+10	55.0



Imports declined in February for the tenth consecutive month, although at a lesser rate than in the three past months. The Imports Index, not seasonally adjusted, rose to 46.0%, up from 43.0% in January. However, the percentage of members importing fell to 76%, down from 79% in January, and below the average for all of 1990 (77%).

Imports	%Importing	%Higher	%Same	%Lower	Net	Index
February 1991	76	12	68	20	– 8	46.0
January 1991	79	9	68	23	–14	43.0
December 1990	76	8	73	19	–11	44.5
November 1990	76	6	72	22	–16	42.0

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured [New Orders, New Export Orders, Imports, Production, Supplier Deliveries, Inventories, Employment and Prices], this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

Responses to Buying Policy reflect the percent reporting the current months lead time, the approximate weighted number of days ahead for which commitments are made for Production Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.

AG910-1

Decline Slows Again in March; PMI Rises to 40.0%; Price Index Slides to 38.6%

MARCH REPORT

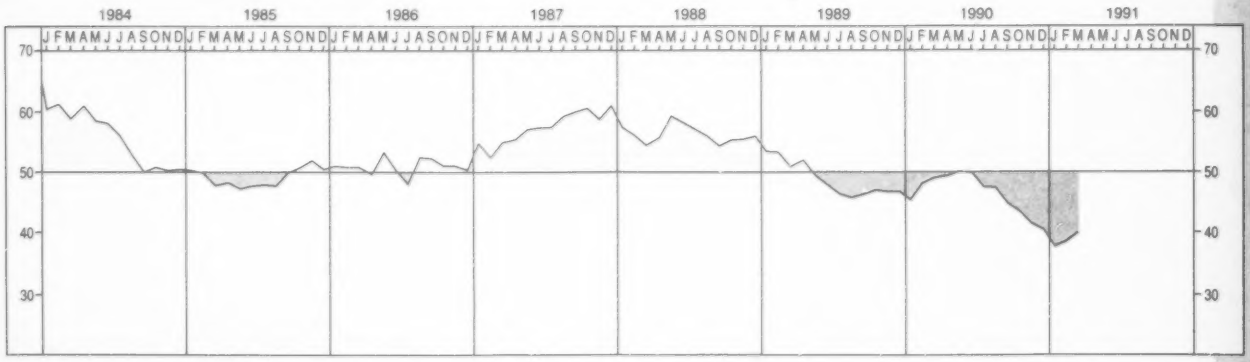
Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of corporate purchasing, Pitney Bowes, Inc.

The U.S. economy declined in March 1991, marking the second consecutive quarterly decline, although the rate of the decline diminished for the second consecutive month, say the nation's purchasing executives in their latest **Report on Business**. The Production Index declined for the eighth consecutive month, but the rate of decline was less for the second consecutive month. The New Orders Index in March declined for the ninth consecutive month although the rate of decline was significantly less for the second consecutive month.

The rate of decline in the Supplier Deliveries Index in March was slightly greater than in February and January, confirming the relative ease in obtaining products and the decreasing number of items in short supply. Inventories declined for the 28th consecutive month, although at the lowest rate of decline since August 1990. The Employment Index, a lagging indicator, declined in March for the 26th consecutive month, and is the lowest since November 1982 (the trough of the previous recession). The Price Index declined in March for the third consecutive sharp drop in prices. This suggests that there will be declines in the Producer Price Index and lower increases in the Consumer Price Index in the months ahead. New Export Orders expanded sharply in March, while Imports declined for the 11th consecutive month, although at a lesser rate.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of corporate purchasing at Pitney Bowes, Inc. Said Bretz, "Although March concluded the second consecutive quarterly decline in the economy, it also registered the second consecutive month of encouraging signals that we may have seen the bottom of the declining trend in January 1991. The New Orders Index, although still in a decline, rose significantly for the second consecutive month, and the sharp decrease in prices strongly suggests decreasing future inflation. Overall, the light at the end of the tunnel got a little brighter in March, and the economy is clearly moving in the right direction."

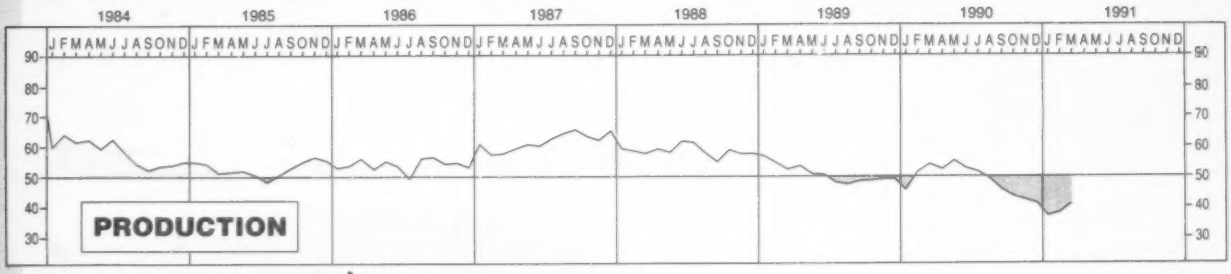
PURCHASING MANAGERS' INDEX



PURCHASING MANAGERS' INDEX (PMI)

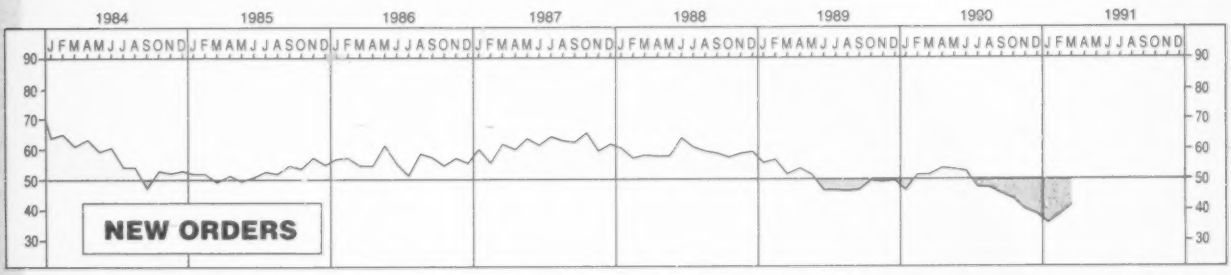
March '90	49.0	October '90	43.6
April '90	49.4	November '90	41.6
May '90	50.1	December '90	40.5
June '90	49.9	January '91	37.7
July '90	47.6	February '91	38.5
August '90	47.4	March '91	40.0
September '90	44.9		

The Purchasing Managers' Index (PMI) rose to 40.0% in March, up from 38.5% in February and the 10th consecutive month below 50%. However, it is the second consecutive improvement for the PMI. A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. Bretz added, "March completed the second consecutive quarter that the PMI has remained below 44%, which is generally indicative of a decline in the entire economy. However, the March PMI of 40.0% is approximately the level the PMI reached by the 16th month (November 1982, 39.2%) after the previous recession began, an enlightening comparison."



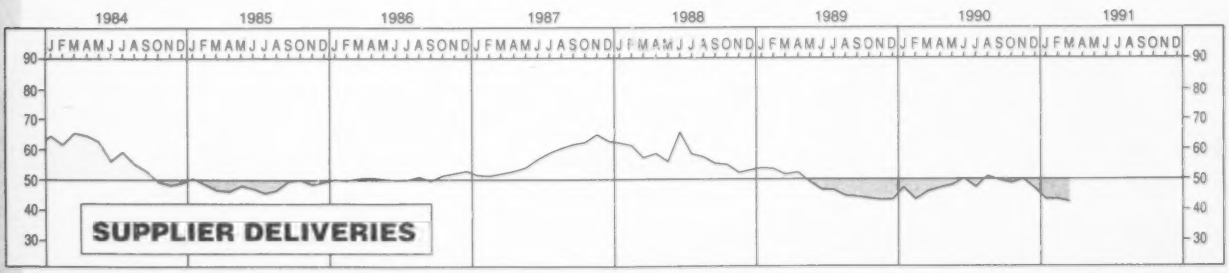
Production declined in March for the eighth consecutive month. Though still declining, the Production Index rose for the second consecutive month to 41.0%, a healthy increase from 38.1% in February. The continuing improvement in New Orders in March should result in strengthening production levels into the second quarter.

Production	%Better	%Same	%Worse	Net	Index
March 1991	15	54	31	–16	41.0
February 1991	15	49	36	–21	38.1
January 1991	14	47	39	–25	37.1
December 1990	12	53	35	–23	41.0



New Orders declined in March for the ninth consecutive month. Nevertheless, the March New Orders Index rose to 41.5% from 38.3% in February. This second consecutive sharp rise in this leading indicator and driver of the manufacturing economy appears to be trumpeting the early continuation of an upward trend.

New Orders	%Better	%Same	%Worse	Net	Index
March 1991	20	47	33	–13	41.5
February 1991	17	45	38	–21	38.3
January 1991	15	44	41	–26	35.7
December 1990	15	40	45	–30	38.5



The Supplier Deliveries Index declined in March for the seventh consecutive month. The index declined to 42.4%, down somewhat from February (43.3%) and the lowest since May 1982 (42.1%), which was during the previous recession, and reflects the relative ease in obtaining most items on schedule.

Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
March 1991	3	81	16	–13	42.4
February 1991	4	78	18	–14	43.3
January 1991	4	80	16	–12	43.3
December 1990	5	83	12	– 7	46.8

IN SHORT SUPPLY

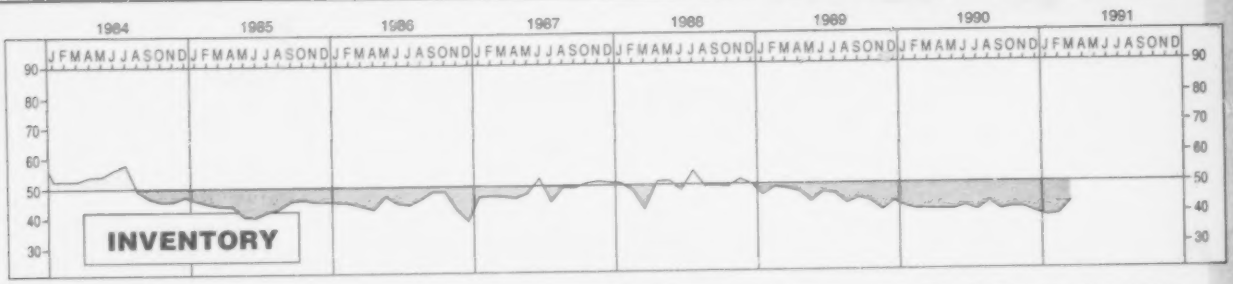
Bearings — 32nd consecutive month, a consequence of anti-dumping suits; **Steel Castings** — 7th consecutive month; **Caustic Soda/Soda Ash** — 46th consecutive month (used heavily in paper making, petroleum refining, and soap making); **Methyl Ethyl Ketone (MEK)** — 7th consecutive month (used heavily as a chemical solvent in surface coatings, and making resins); **DRAMS 386**.

UP IN PRICE

Platinum; Caustic Soda/Soda Ash — 52nd consecutive month; **Methanol** — 2nd consecutive month (used heavily as a solvent, a motor fuel additive, and in synthesizing other chemicals); **Methyl Ethyl Ketone (MEK)** — 7th consecutive month; **Rosin** — Used in making varnish, varnish and paint dryers, inks, soap, waxes, polishes, floor coverings, paper, plastic, and sizing; **Tall Oil-Crude and Fatty Acid** — Used in making soap, greases, paint, linoleum, rubber formulations, and cutting oils; **Carbon Paper; Cotton Fabric** — 3rd consecutive month; **Silicon Wafers** — Used in making semiconductors and integrated circuits; **1 MEG. DRAMS** — 2nd consecutive month; **Beef; Casein** — Used in making molded plastics, adhesives, paints, textile finishes, paper coatings, and food processing; **Corn** — 2nd consecutive month; **Corn Starch; Orange Juice; Soybean Meal; Sugar** — After being reported down in price for the seventh consecutive month in February; **Turkey Meat**.

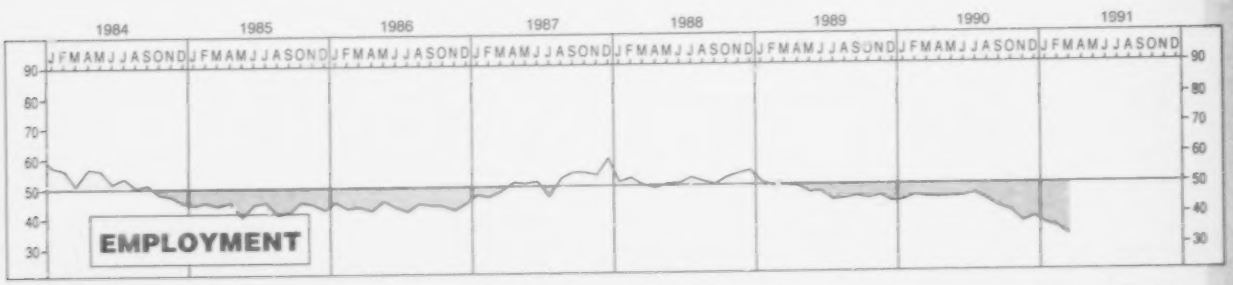
DOWN IN PRICE

Aluminum — 5th consecutive month; **Aluminum Castings** — 2nd consecutive month; **Brass** — 5th consecutive month; **Copper** — 5th consecutive month; **Lead; Magnesium** — 2nd consecutive month (used heavily as a constituent of light alloys for manufacturing precision instruments); **Magnesium Wire Base; Nickel** — 5th consecutive month (used heavily in making stainless steel, plating metals, and batteries); **Rhodium** — Used heavily as an alloy with platinum and as a corrosion-resistant electroplate for protection of silverware from tarnishing; **Steel** — 2nd consecutive month; **Steel Scrap** — 5th consecutive month; **Steel Containers; Zinc** — 8th consecutive month; **Stainless Steel** — 3rd consecutive month; **Tin** — Used as a protective coating on cans, metal sheets, and other metal products; **Bearings** — 5th consecutive month; **Cable** — Used heavily in telecommunication lines;



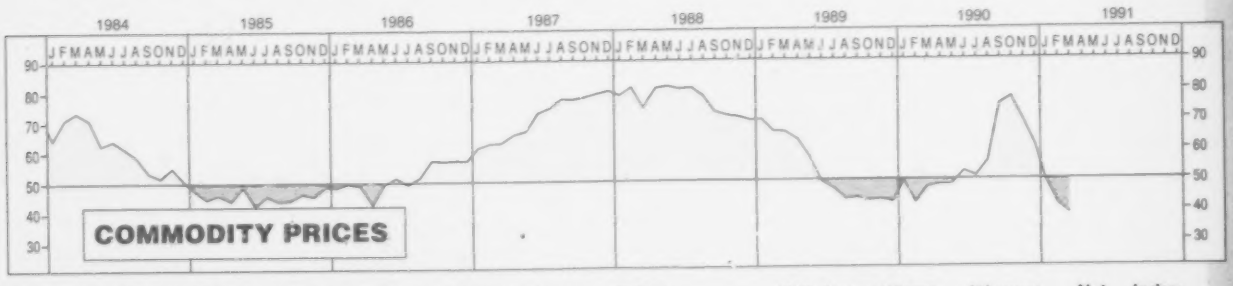
Inventories declined in March for the 28th consecutive month, although at the lowest rate of decline since August 1990 (also 43.5%). This rise in the index reflects to some degree the difficulty in a declining economy to reduce inventories sufficiently to match declining production.

Inventories	%Higher	%Same	%Lower	Net	Index
March 1991	18	55	27	– 9	43.5
February 1991	15	52	33	–18	39.2
January 1991	15	47	38	–23	38.6
December 1990	15	47	38	–23	39.7



Employment declined in the manufacturing economy for the 26th consecutive month. The Employment Index fell to 32.7% in March, down from 35.4% in February, and is the lowest level since November 1982. This lagging indicator will generally not bottom out for some months after the leading indicators have changed direction.

Employment	%Higher	%Same	%Lower	Net	Index
March 1991	5	58	37	–32	32.7
February 1991	5	60	35	–30	35.4
January 1991	7	57	36	–29	36.5
December 1990	7	61	32	–25	38.7



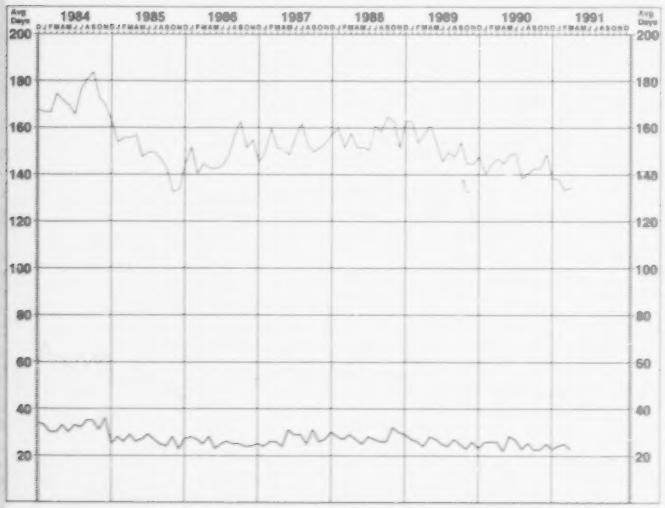
By a margin of almost 4 to 1, more purchasers reported paying lower prices than higher prices in March. The March Price Index declined to 38.6%, a sharp drop from 41.8% in February and the lowest level registered since November 1982 (37.3%). The March index plunged from October's 77.3% and is signalling a trend toward lower inflation.

Prices	%Higher	%Same	%Lower	Net	Index
March 1991	8	64	28	–20	38.6
February 1991	12	60	28	–16	41.8
January 1991	25	54	21	+ 4	49.1
December 1990	32	55	13	+19	61.2

Uncoated Offset Paper — 3rd consecutive month; **Corrugated Shipping Containers** — 13th time in 14 months; **Linerboard; Wood; Wood Pulp; Alcohols** — Used as a solvent in laboratories and in industries; **Benzene** — 2nd consecutive month (used heavily in making medicinal chemicals, dyes, varnishes, lacquers, and resins); **Butadiene** — Used heavily as a polymer component in making synthetic rubber; **Ethylene** — 2nd consecutive month (used heavily in making ethylene oxide, plastic resins, and glycols); **Ethylene Glycol** — Used heavily in making antifreeze, brake fluid, plastic paint, and ink; **Glycerine** — 3rd consecutive month (used in various ways in confectionaries, cosmetics, soaps, and tobacco); **Monosodium Glutamate** — Used heavily as a food flavor enhancer; **Phenol** — Used heavily in making phenolic resins; **Plastic Resins** — After being reported up in price for the 6th consecutive month in February; **Polyethylene** — After being reported up in price for the 6th consecutive month in February 1991 (used heavily in making plastic packaging materials, kitchenware, tank and pipe linings, paper coatings, and textile stiffeners); **Polypropylene** — 3rd consecutive month; **Polystyrene** — 2nd consecutive month (used heavily in making plastic foam packaging, cups, and plates); **Propylene** — 2nd consecutive month (used heavily in making polypropylene plastic and acetone, isopropyl alcohol, phenol, propylene oxide, and other chemicals); **Solvents** — 3rd consecutive month; **Styrene** — 4th consecutive month; **Titanium Dioxide** — 2nd consecutive month (a lead-free pigment used as a whitener in coatings, paints, paper, and other industrial applications); **Toluene** — 4th consecutive month (used heavily in making explosives, dyes, and benzoic acid, as a solvent in paint and as a gasoline additive); **Xylene** — 4th consecutive month (used heavily in making benzoic acid, phthalic anhydride, polyester fibers, and dyes); **Zinc Oxide** — 5th time in 7 months (used heavily as a pigmentation in paints and inks, in cosmetics, driers, quick-setting cement, and copier paper); **Antifreeze; Diesel Fuel** — 3rd consecutive month; **Fuel Oil** — 2nd consecutive month; **Gasoline** — 3rd consecutive month; **Natural Gas** — 3rd consecutive month; **Propane** — 3rd consecutive month; **Lube Additives** — Chemical additives for making lubricating oil and grease; **Petrochemicals** — 2nd consecutive month; **Glass; Ceramic Capacitors; 4 MEG. DRAMS** — 2nd consecutive month; **Microprocessors** — 2nd consecutive month; **Semiconductors; High Fructose Corn Syrup** — 5th consecutive month; **Malt** — Used heavily in brewing beer; **Transportation Charges** — 2nd consecutive month.

BUYING POLICY

Leadtimes for Capital Expenditures rose slightly in March but declined slightly for Production Materials and Maintenance, Repair, and Operating (MRO) Supplies. The average leadtimes for Capital Expenditures rose to 135 days in March, up from 134 days in February, but still significantly lower than 149 days in November 1990. The average leadtimes for Production Materials fell to 47 days in March, down from 48 days in February. The average leadtimes for MRO Supplies shortened to 23 days, down from 25 days in February.

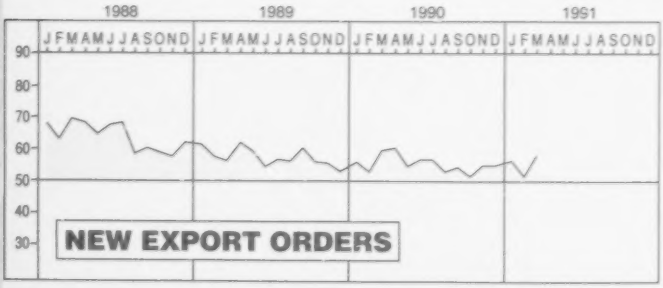


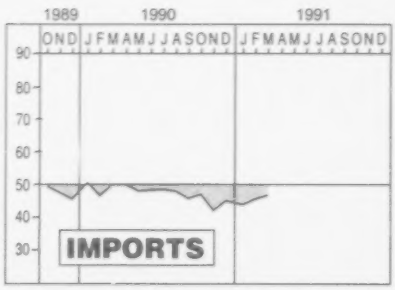
PERCENT REPORTING

Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
March	12	8	12	23	32	13	135
February	12	8	13	21	34	12	134
January	12	7	14	21	32	14	138
December	13	7	10	23	33	14	139

Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
March	19	40	25	13	2	1	47
February	21	40	25	10	2	2	48
January	20	39	28	11	1	1	45
December	21	43	22	10	2	2	47

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
March	46	41	10	3	0	0	23
February	41	45	12	2	0	0	25
January	45	43	9	2	1	0	24
December	46	43	8	3	0	0	23





New Export Orders increased sharply in March. The New Export Orders Index, not seasonally adjusted, surged to 58.5% in March, up from 52.0% in February and is the highest since April 1990. The percentage of members exporting fell to 75%, down from 77% last month, but still above the average for all of 1990 (74%).

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
March 1991	75	25	67	8	+17	58.5
February 1991	77	19	66	15	+ 4	52.0
January 1991	75	25	63	12	+13	56.5
December 1990	74	21	68	11	+10	55.0

Imports declined in March for the 11th consecutive month, although at a slightly lesser rate than during the previous six months. The Imports Index, not seasonally adjusted, rose to 47.0%, up from 46.0% in February. The percentage of members importing in March remained the same as in February (76%).

Imports	%Importing	%Higher	%Same	%Lower	Net	Index
March 1991	76	10	74	16	– 6	47.0
February 1991	76	12	68	20	– 8	46.0
January 1991	79	9	68	23	–14	43.0
December 1990	76	8	73	19	–11	44.5

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured [New Orders, New Export Orders, Imports, Production, Supplier Deliveries, Inventories, Employment and Prices], this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

Responses to Buying Policy reflect the percent reporting the current months lead time, the approximate weighted number of days ahead for which commitments are made for Production Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.

AGT10-1

Report On Business®

Economic Decline Slowed in April; PMI Rises to 42.1%; Price Index Slips to 36.3% — Lowest in 9 Years

APRIL REPORT

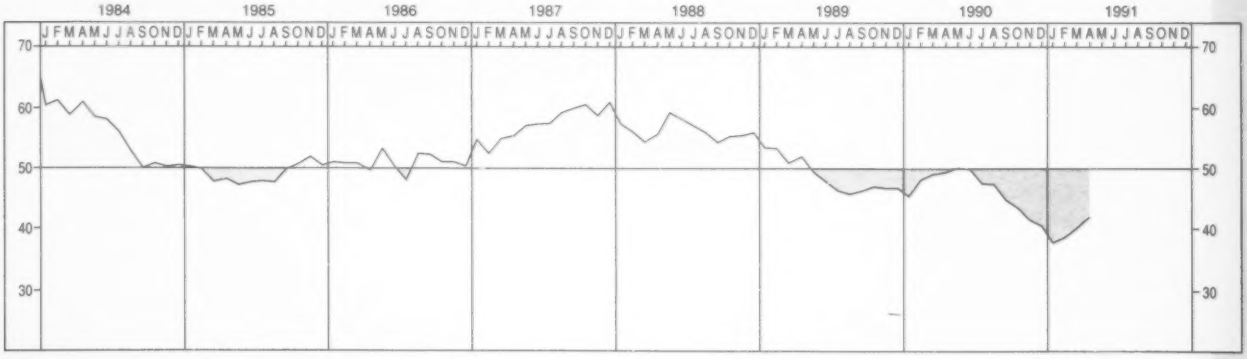
Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of corporate purchasing, Pitney Bowes, Inc.

The U.S. economy declined in April 1991, for the seventh consecutive month, although the rate of the decline was less for the third straight month, say the nation's purchasing executives in their latest **Report on Business**. The Production Index declined in April for the ninth consecutive month, but for the third straight time, the rate of decline was less than the previous month. Although the New Orders Index also declined in April ~~for the 10th~~ consecutive time, the rate of decline was significantly less for the third month in a row.

The Employment Index, a lagging indicator, declined in April for the 27th consecutive month, but at a lesser rate than last month. The rate of decline in the Supplier Deliveries Index was lower in April mirroring the same slowing in the rates of decline in both Production and New Orders. The Inventories Index declined sharply in April. The Price Index declined in April for the fourth consecutive month and is the lowest since April 1982. Once again, this suggests more declines in the Producer Price Index and lower increases in the Consumer Price Index over the next few months. New Export Orders expanded sharply in April, although at a lesser rate than in March, while Imports continued to decline for the 12th consecutive month, suggesting continued improvement in reducing the trade deficit.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of corporate purchasing at Pitney Bowes, Inc. Said Bretz, "Although the manufacturing sector and the overall U.S. economy are still declining, the rate of decline lessened for the third consecutive month. It would be difficult to deny that the more leading indexes, the New Orders, Supplier Deliveries, and Purchasing Managers' Indexes, have formed a bottom over the past three months and are indicating a gradual trend toward recovery. The decline in inflation and low inventory level suggest the trend will not be short-lived."

PURCHASING MANAGERS' INDEX

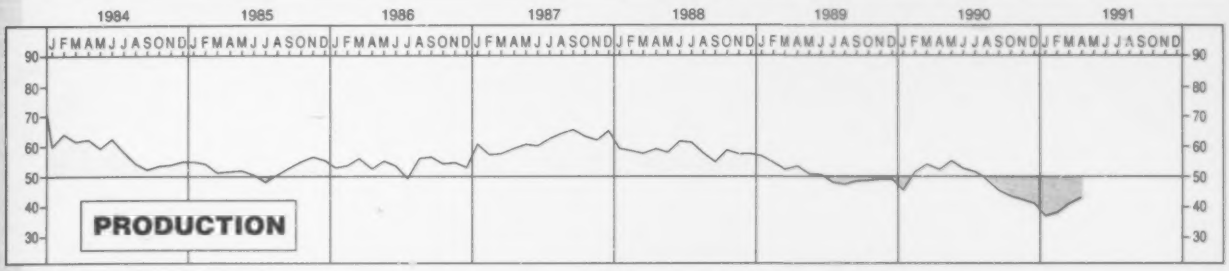


PURCHASING MANAGERS' INDEX (PMI)

April '90	49.4	November '90	41.6
May '90	50.1	December '90	40.5
June '90	49.9	January '91	37.7
July '90	47.6	February '91	38.5
August '90	47.4	March '91	40.0
September '90	44.9	April '91	42.1
October '90	43.6		

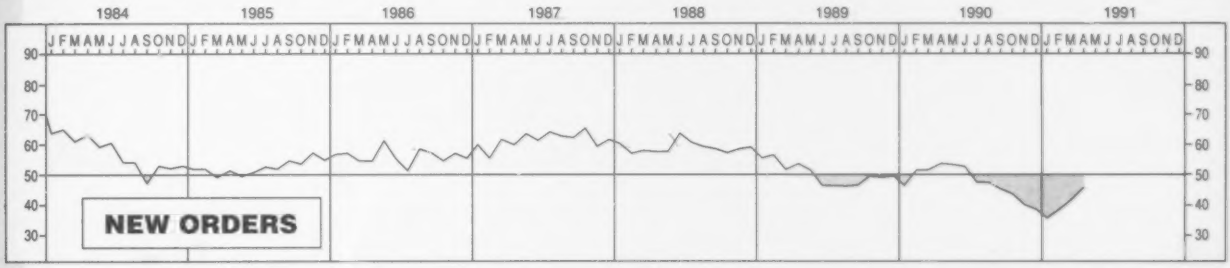
The Purchasing Managers' Index (PMI) rose to 42.1% in April, up from 40.0% in March and the 11th consecutive month below 50%. However, it is the third consecutive month that this leading indicator has registered higher than the previous month. A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. Bretz added, "April marked the seventh consecutive month that the PMI has remained below 44%, which is generally indicative of a decline in the overall economy. In the previous recession in 1981/1982, the PMI remained below 44% for 16 months. If the PMI continues to improve at about the same rate as the past month, the decline in the overall economy could end by June (1991)."

BUSINESS



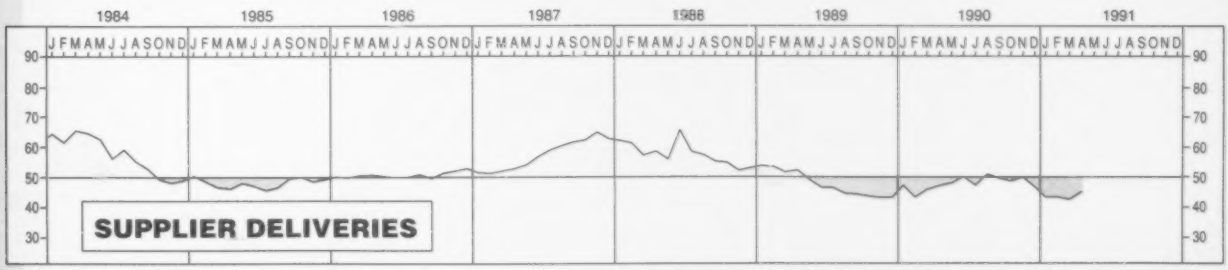
Production declined in April for the ninth consecutive month, although at a lesser rate than during the previous five months. The Production Index rose to 43.1%, up from 41.0% in March. The sharp increase in the New Orders Index should result in similar improvements in production levels through the second quarter.

Production	%Better	%Same	%Worse	Net	Index
April1991	17	60	23	- 6	43.1
March 1991	15	54	31	-16	41.0
February 1991	15	49	36	-21	38.1
January 1991	14	47	39	-25	37.1



New Orders declined in April for the 10th consecutive month. The New Orders Index rose to 45.9%, a sharp move upward from 41.5% in March. This third consecutive rise in this leading indicator continues to signal lower declines in production in the months ahead.

New Orders	%Better	%Same	%Worse	Net	Index
April 1991	26	49	25	+ 1	45.9
March 1991	20	47	33	-13	41.5
February 1991	17	45	38	-21	38.3
January 1991	15	44	41	-26	35.7



The Supplier Deliveries Index declined in April for the eighth consecutive month. However, the index rose to 45.1%, up significantly from 42.4% in March, which was the lowest reading since May 1982 (42.1%). The increase reflects the improvement in production over the previous three months.

Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
April 1991	3	84	13	-10	45.1
March 1991	3	81	16	-13	42.4
February 1991	4	78	18	-14	43.3
January 1991	4	80	16	-12	43.3

IN SHORT SUPPLY

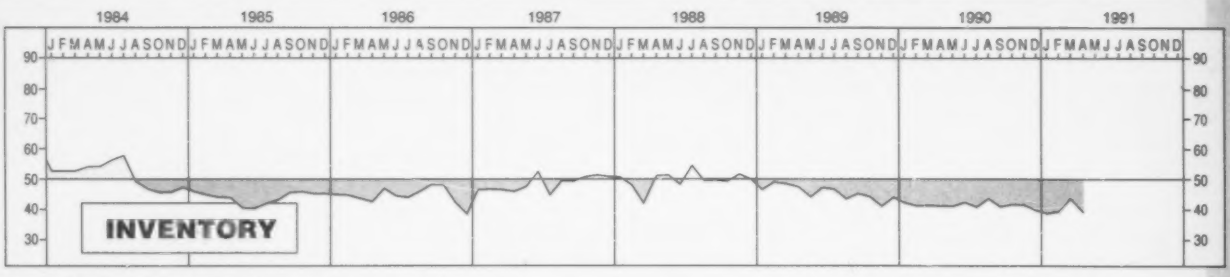
Bearings — 33rd consecutive month, a consequence of anti-dumping suits; **Steel Castings** — 8th consecutive month; **Caustic Soda/Soda Ash** — 47th consecutive month (used heavily in paper making, petroleum refining, and soap making); **Methyl Ethyl Ketone (MEK)** — 8th consecutive month (used heavily as a chemical solvent in surface coatings, and making resins).

UP IN PRICE

Nickel — After being reported down in price in March for the 5th consecutive month (used heavily in making stainless steel, plating metals, and batteries); **Caustic Soda/Soda Ash** — 53rd consecutive month; **Methanol** — 3rd consecutive month (used heavily as a solvent, a motor fuel additive, and in synthesizing other chemicals); **Methyl Ethyl Ketone (MEK)** — 8th consecutive month; **Rosin-based Chemicals** — Used in making varnish, varnish and paint dryers, inks, soap, waxes, polishes, floor coverings, paper, plastic, and sizing; **Tall Oil-Crude and Fatty Acid** — 2nd consecutive month (used in making soap, greases, paint, linoleum, rubber formulations, and cutting oils); **Timber** — Essentially only in the northwestern U.S., where conservationists' efforts have been successful in reducing the Douglas Fir acreage the government will allow to be cut, causing shortages in lumber, chips for paper mills, and threatened reduction of log exports to the Pacific Rim; **Cotton Fabric** — 4th consecutive month; **1 Megabyte DRAMS** — 3rd consecutive month; **Beef** — 2nd consecutive month; **Corn** — 3rd consecutive month; **High Fructose Corn Syrup** — After being reported down in price in March for the 5th consecutive month; **Apple Juice Concentrate; Soybean Meal** — 2nd consecutive month.

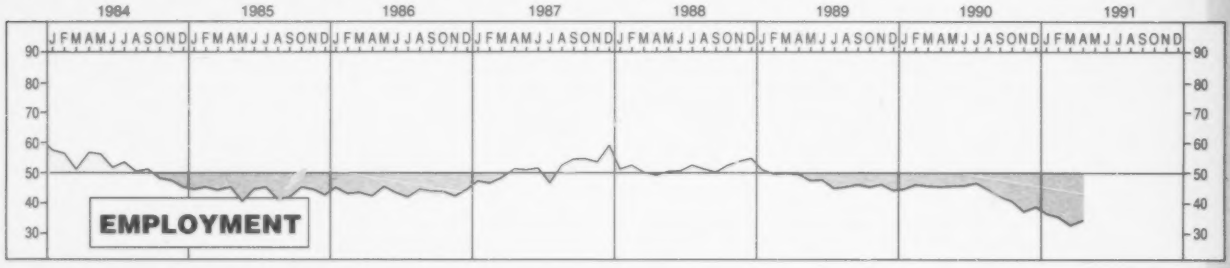
DOWN IN PRICE

Aluminum — 6th consecutive month; **Aluminum Containers; Copper** — 6th consecutive month; **Magnesium** — 3rd consecutive month (used heavily as a constituent of light alloys for manufacturing precision instruments; **Platinum; Rhodium** — 2nd consecutive month (used heavily as an alloy with platinum and as a corrosion-resistant electroplate for protection of silverware from tarnishing); **Steel** — 3rd consecutive month; **Steel Scrap** — 6th consecutive month; **Steel Containers** — 2nd consecutive month; **Zinc** — 9th consecutive month (used heavily in



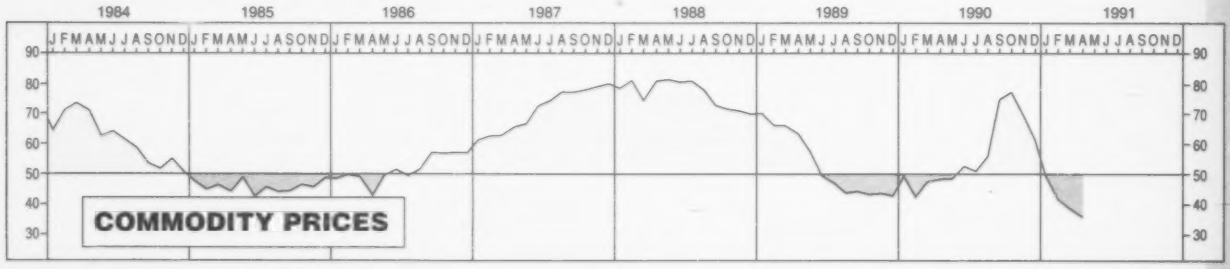
Inventories declined in April for the 29th consecutive month, at a sharply higher rate. The Inventories Index declined to 39.0%, down significantly from 43.5% in March, which was the lowest rate of decline since August 1990 (also 43.5%). The April index of 39.0% is a reaffirmation of the commitment of purchasing executives to keep inventory levels low and in proportion to production requirements.

Inventories	%Higher	%Same	%Lower	Net	Index
April 1991	14	53	33	–21	39.0
March 1991	18	55	27	– 9	43.5
February 1991	15	52	33	–18	39.2
January 1991	15	47	38	–23	38.6



Employment declined in April for the 27th consecutive month, but at a lesser rate than last month. The Employment Index rose to 34.4%, up from 32.7% in March, which was the lowest level since November 1982. Although Employment is a lagging indicator, April's index may indicate that March was the bottom of the decline in Employment and that April is the first month in an upward trend.

Employment	%Higher	%Same	%Lower	Net	Index
April 1991	8	57	35	–27	34.4
March 1991	5	58	37	–32	32.7
February 1991	5	60	35	–30	35.4
January 1991	7	57	36	–29	36.5



Prices declined in April for the fourth consecutive month. The Price Index fell to 36.3%, down from 38.6% in March, and is the lowest level in nine years (April 1982 — 35.7%, which is the lowest level of the Price Index during the previous two recessions). The index is not likely to fall much lower.

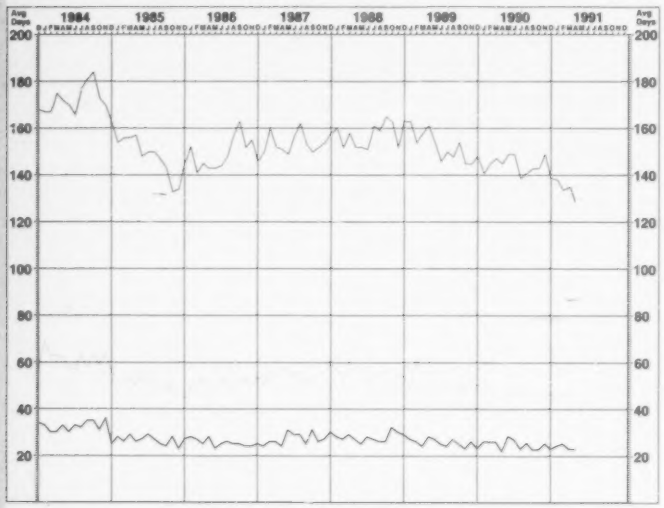
Prices	%Higher	%Same	%Lower	Net	Index
April 1991	10	60	30	–20	36.3
March 1991	8	64	28	–20	38.6
February 1991	12	60	28	–16	41.8
January 1991	25	54	21	+ 4	49.1

galvanizing sheet iron, as an ingredient of alloys such as brass and bronze, as a protective coating to prevent corrosion of other metals, for electrical apparatus, dry cell batteries, building materials, and automotive equipment; **Stainless Steel** — 4th consecutive month; **Steel Fabrication; Cable** — 2nd consecutive month; **Magnet Wire; Uncoated Offset Paper** — 4th consecutive month; **Corrugated Shipping Containers** — 14th time in 15 months; **Linerboard** — 2nd consecutive month; **Paper Bags; Wood Pulp** — 2nd consecutive month; **Alcohols** — 2nd consecutive month; **Ethylene** — 3rd consecutive month (used heavily in making ethylene oxide, plastic resins, and glycols); **Ethylene Derivatives; Glycerine** — 4th consecutive month (used in confectioneries, cosmetics, soaps, and tobacco); **Methylene Chloride** — Used as a solvent for cellulose acetate, in food processing, and as a degreasing and cleaning fluid; **Phenol** — 2nd consecutive month (used heavily in making phenolic resins); **Plastic Resins** — 2nd consecutive month, after being reported up in price for the 6th consecutive month in February; **Polyethylene** — 2nd consecutive month, after being reported up in price for the 6th consecutive month in February; **Polypropylene** — 4th consecutive month (used heavily in making plastic fabric, yarns, carpets, and packaging materials); **Polystyrene** — 3rd consecutive month; **Polyvinyl Chloride (PVC)** — Used in wire and cable coating, vinyl siding, pipe tubing, textile finishing, belting, and auto interiors; **Propylene** — 3rd consecutive month; **Solvents** — 4th consecutive month; **Styrene** — 5th consecutive month; **Sulfuric Acid** — 3rd time in 4 months (used heavily in making fertilizers, dyes, adhesives, and other acids); **Titanium Dioxide** — 3rd consecutive month (a lead-free pigment used as a whitener in coatings, paints, paper, and other industrial applications); **Toluene** — 5th consecutive month (used heavily in making explosives, dyes, and benzoic acid, as a solvent in paint and as a gasoline additive); **Xylene** — 5th consecutive month (used heavily in making benzoic acid, phthalic anhydride, polyester fibers, and dyes); **Zinc Oxide** — 6th time in 8 months (used heavily as a pigmentation in paints and inks, in cosmetics, driers, quick-setting cement, and copier paper); **Nylon; Polyester; Fuel Oil** — 3rd consecutive month; **Natural Gas** — 4th consecutive month; **Petrochemicals** — 3rd consecutive month; **Fiberglass; Corn Starch** — 2nd time in 3 months; **Sugar** — 8th time in 9 months; **Soybeans and Soybean Oil; Transportation Charges** — 3rd consecutive month.

BUYING POLICY

Leadtimes for Capital Expenditures fell sharply in April. The average leadtimes for Capital Expenditures dropped to 129 days, down significantly from 135 days in March, and is the lowest since NAPM began tracking leadtimes in January 1975. Capital purchases always lag the economy and April's report confirms this fact.

The average leadtimes for Production Materials also shortened in April, to 46 days, down from 47 days in March. However, average leadtimes for Maintenance, Repair, and Operating (MRO) Supplies remained the same as in March (23 days).

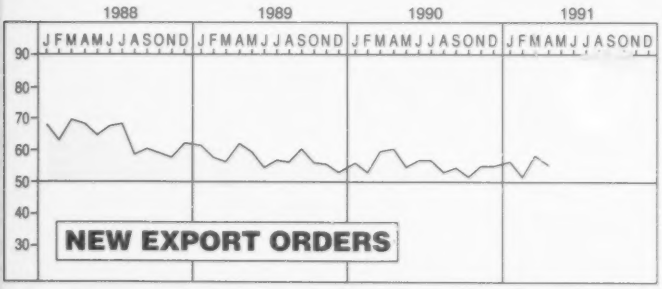


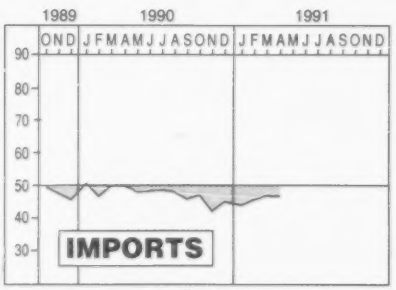
PERCENT REPORTING

Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
April	12	9	16	19	33	11	129
March	12	8	12	23	32	13	135
February	12	8	13	21	34	12	134
January	12	7	14	21	32	14	138

Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
April	18	42	26	11	2	1	46
March	19	40	25	13	2	1	47
February	21	40	25	10	2	2	48
January	20	39	28	11	1	1	45

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
April	47	40	10	3	0	0	23
March	46	41	10	3	0	0	23
February	41	45	12	2	0	0	25
January	45	43	9	2	1	0	24





New Export Orders continued to exhibit a strong rate of growth in April. The New Export Orders Index, not seasonally adjusted, registered 56.5%, down from 58.5%, which was the highest since April 1990. The percentage of members exporting remained the same as last month, 75%.

Imports declined again in April, marking a full year of decline. The Imports Index, not seasonally adjusted, remained at 47.0%, the same as in March. The percentage of members importing in April rose to 77%, up from 76% in March.

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
April 1991	75	22	69	9	+13	56.5
March 1991	75	25	67	8	+17	58.5
February 1991	77	19	66	15	+ 4	52.0
January 1991	75	25	63	12	+13	56.5

Imports	%Importing	%Higher	%Same	%Lower	Net	Index
April 1991	77	9	76	15	– 6	47.0
March 1991	76	10	74	16	– 6	47.0
February 1991	76	12	68	20	– 8	46.0
January 1991	79	9	68	23	–14	43.0

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured [New Orders, New Export Orders, Imports, Production, Supplier Deliveries, Inventories, Employment and Prices], this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

Responses to Buying Policy reflect the percent reporting the current manufacturing lead time, the approximate weighted number of days ahead for which commitments are being made for Production Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.

Report On Business®

Overall Economy Grew in May; Manufacturing Decline Slows Further; PMI Rises to 45.4%

MAY REPORT

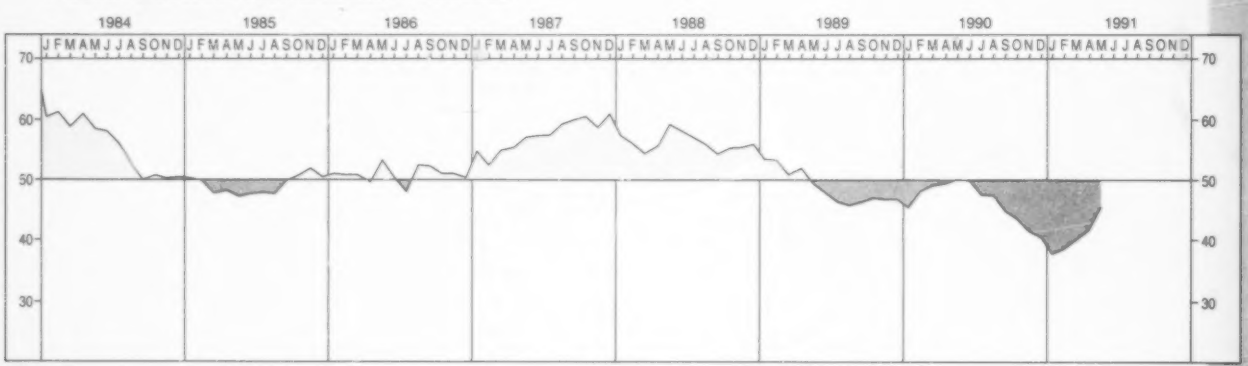
Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of corporate purchasing, Pitney Bowes, Inc.

The U.S. economy grew in May as indicated by the PMI surpassing the 44% level, which ended a string of seven monthly declines. However, the manufacturing economy still below 50%, continued to decline but at a lesser rate of change for the fourth straight month, say the nation's purchasing executives in their latest **Report on Business.** The Production Index declined in May for the 10th consecutive month, but for the fourth straight time, the rate of decline was less than the previous month. The New Orders Index increased sharply in May and expanded for the first time since June 1990. New Export Orders also expanded in May, although at a lesser rate than last month. Imports continued to decline for the 13th consecutive month.

The Employment Index declined in May for the 28th consecutive month, although at the lowest rate of change in five months. The Supplier Deliveries Index declined for the ninth consecutive month, but at the lowest rate in five months. The Inventories Index declined in May for the 30th consecutive month. The Price Index declined in May for the fifth consecutive month and, except for last month, reached the lowest in nine years. Further declines in the Production Price Index and low increases in the Consumer Price Index should follow.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of corporate purchasing at Pitney Bowes, Inc. Said Bretz, "Now that the overall economy has begun to expand again, the next milestone for improvement is the end of the decline in the manufacturing sector. With inventories at very low levels and inflation in check, if not declining, the manufacturing economy appears poised to grow. If the future rate of improvement in the economy equals the last two months, the manufacturing sector could be expanding again in July."

PURCHASING MANAGERS' INDEX

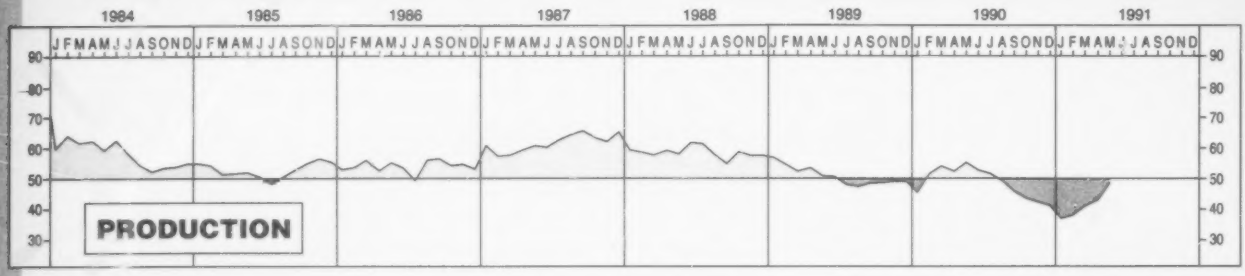


PURCHASING MANAGERS' INDEX (PMI)

May '90	50.1	December '90	40.5
June '90	49.9	January '91	37.7
July '90	47.6	February '91	38.5
August '90	47.4	March '91	40.0
September '90	44.9	April '91	42.1
October '90	43.6	May '91	45.4
November '90	41.6		

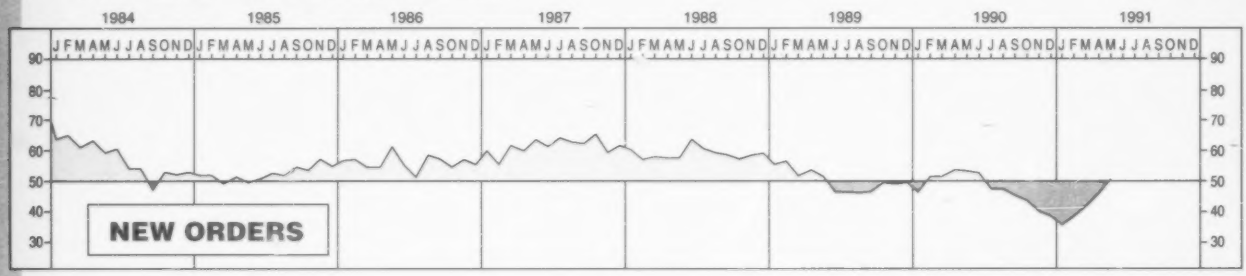
The Purchasing Managers' Index (PMI) rose to 45.4% in May, up sharply from 42.1% in April. May marks the fourth consecutive month the PMI has increased from the previous month and the highest it has been since August 1990. A reading below 50% indicates that the manufacturing economy is generally declining; above 50%, that it is generally expanding. Bretz added, "After seven consecutive months below 44%, the PMI breached the 44% barrier, beyond which is generally indicative of growth in the overall economy. In the 1981/1982 recession, the PMI was below 44% for 16 months."

BUSINESS



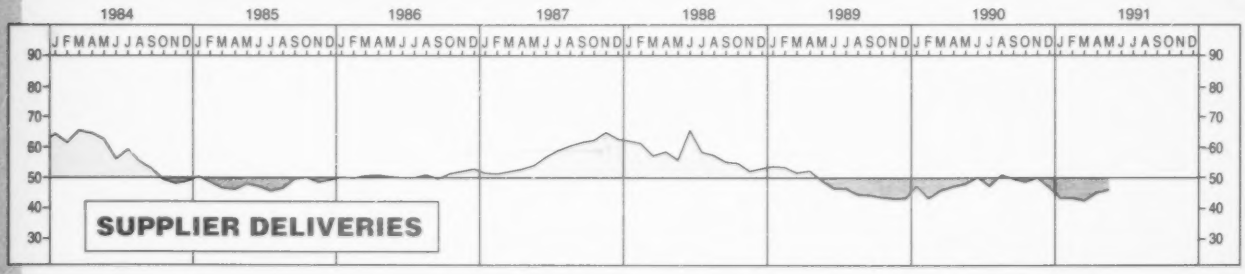
Production declined in May for the 10th consecutive month, although the rate of decline lessened successively for the fourth month in a row. The Production Index rose to 48.8%, up sharply from 43.1% in April and the highest since August 1990 (49.2%). If the increases in Production continue to reflect the sharp increases in New Orders, growth in Production will take place as early as June 1991.

Production	%Better	%Same	%Worse	Net	Index
May 1991	21	57	22	-1	48.8
April 1991	17	60	23	-6	43.1
March 1991	15	54	31	-16	41.0
February 1991	15	49	36	-21	38.1



The New Orders Index in May ended 10 consecutive monthly declines. The index rose in May to 50.6%, up sharply from 45.9% in April. The index registered above 50%, generally indicative of growth, and reached the highest since June 1990 (52.7%). This growth in the engine of the manufacturing economy should result in continued improvement in Production.

New Orders	%Better	%Same	%Worse	Net	Index
May 1991	28	47	25	+3	50.6
April 1991	26	49	25	+1	45.9
March 1991	20	47	33	-13	41.5
February 1991	17	45	38	-21	38.3



The Supplier Deliveries Index declined in May for the ninth consecutive month, although the rate (46.0%) was the lowest since December 1990 (46.8%). This gradual increase reflects the improvement in Production; however, the Supplier Deliveries Index is lagging that improvement, when generally it leads the Production Index.

Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
May 1991	3	87	10	-7	46.0
April 1991	3	84	13	-10	45.1
March 1991	3	81	16	-13	42.4
February 1991	4	78	18	-14	43.3

IN SHORT SUPPLY

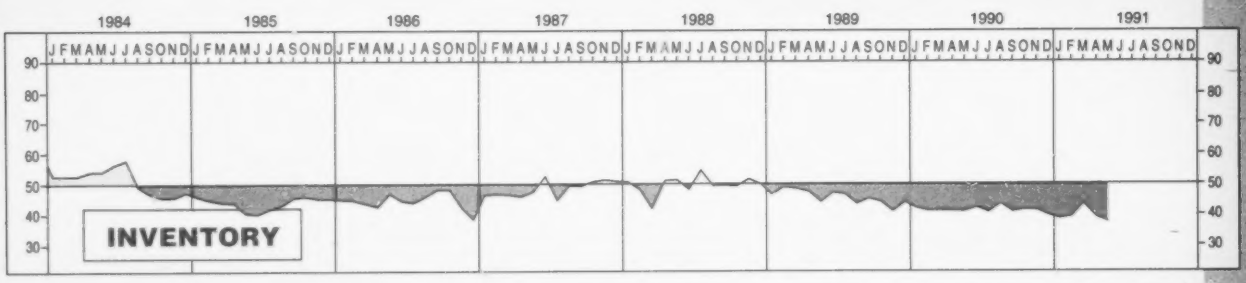
Ethanolamine — Used heavily in polishes, hair waving solutions, and dispersing agents and in the manufacture of antibiotics; **Caustic Soda/Soda Ash** — 48th consecutive month (used heavily in paper making, petroleum refining, and soap making); **Methyl Ethyl Ketone (MEK)** — 9th consecutive month (used heavily as a chemical solvent in surface coatings, and making resins); **Timber** — Essentially only in the Northwestern U.S., where conservationists' efforts have been successful in reducing the Douglas Fir acreage the government will allow to be cut.

UP IN PRICE

Ferro Alloys — Used heavily as a coating for welding rods; **Nickel** — 2nd consecutive month, after being reported down in price in March for the 5th consecutive month (used in making stainless steel, plating metals, and batteries); **Rosin-based Chemicals** — 2nd consecutive month (used in making varnish, varnish and paint dryers, inks, soap, waxes, polishes, floor coverings, paper, plastic, and sizing); **Tall Oil-Crude and Fatty Acid** — 3rd consecutive month (used in making soap, greases, paint, linoleum, rubber formulations, and cutting oils); **Toluene** — After being reported down in price for 5th consecutive month in April (used heavily in making explosives, dyes, and benzoic acid, as a solvent in paint and as a gasoline additive); **Timber** — 2nd consecutive month; **Cotton Fabric** — 5th consecutive month; **Fiberglass** — After being reported down in price in April; **1 Megabyte DRAMS** — 4th consecutive month; **Gasoline; High Fructose Corn Syrup** — 2nd consecutive month; **Apple Juice Concentrate** — 2nd consecutive month; **Soybean Meal** — 3rd consecutive month.

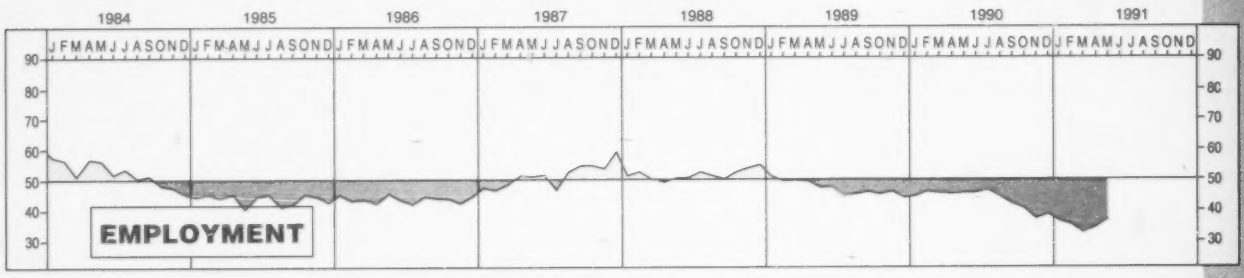
DOWN IN PRICE

Aluminum — 7th consecutive month; **Copper** — 7th consecutive month;



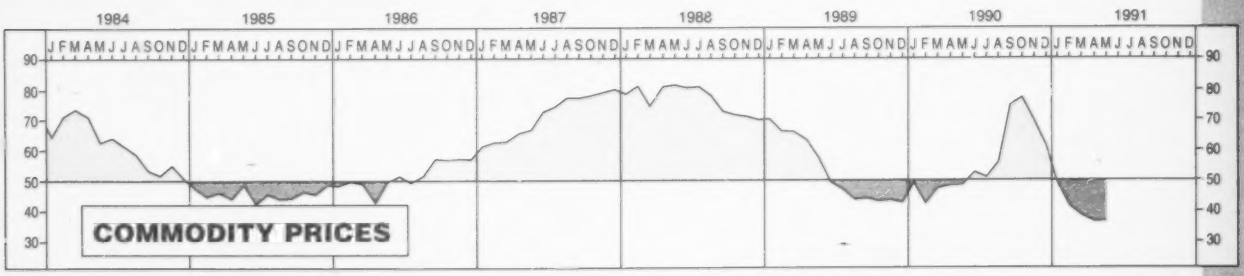
Inventories declined in May for the 30th consecutive month. The Inventories Index decreased to 37.5%, down from 39.0% in April and the lowest since January 1983 (36.3%). This low level of Inventories should result in sustained growth as the economy begins to recover from the recession.

Inventories	%Higher	%Same	%Lower	Net	Index
May 1991	13	49	38	-25	37.5
April 1991	14	53	33	-19	39.0
March 1991	18	55	27	-9	43.5
February 1991	15	52	33	-18	39.2



Employment declined in May, although at a lesser rate than in April. The Employment Index rose to 37.0%, up sharply from 34.4% in April, and the highest since December 1990 (38.7%). As suggested last month, even though Employment is a lagging indicator, March may have been the bottom of the decline in manufacturing employment, and May the second month in an upward trend.

Employment	%Higher	%Same	%Lower	Net	Index
May 1991	5	65	30	-25	37.0
April 1991	8	57	35	-27	34.4
March 1991	5	58	37	-32	32.7
February 1991	5	60	35	-30	35.4



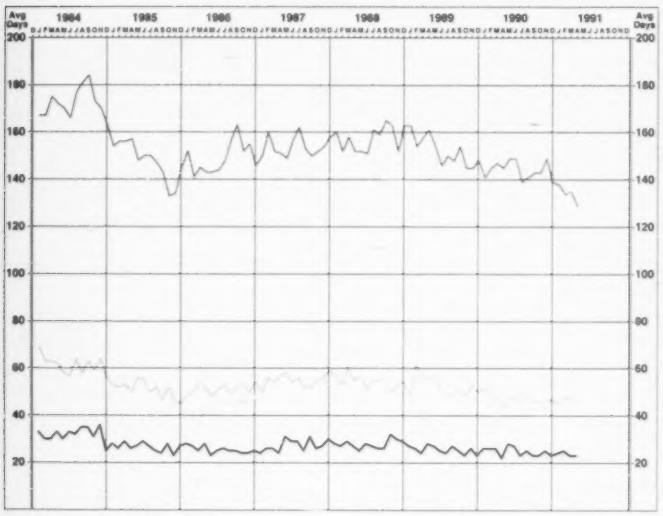
Prices continued to decline in May for the fifth consecutive month. The Price Index rose to 36.9%, up slightly from 36.3% in April. Except for April 1991, the index is at the lowest level since April 1982 35.7%. Also, after 53 consecutive months of being reported up in price, Caustic Soda/Soda Ash was not reported higher priced in May.

Prices	%Higher	%Same	%Lower	Net	Index
May 1991	5	64	31	-26	36.9
April 1991	10	60	30	-20	36.3
March 1991	8	64	28	-20	38.6

Magnesium — 4th consecutive month (used heavily as a constituent of light alloys for manufacturing precision instruments; **Steel** — 4th consecutive month; **Steel Scrap** — 7th consecutive month; **Zinc** — 10th consecutive month (used in galvanizing sheet iron, as an ingredient of alloys such as brass and bronze, as a protective coating to prevent corrosion of other metals; **Bearings** — 6th time in 7 months; **Uncoated Offset Paper** — 5th consecutive month; **Folding Cartons; Corrugated Shipping Containers** — 15th time in 16 months; **Linerboard** — 3rd consecutive month (used heavily in making corrugated cartons); **Paper Bags** — 2nd consecutive month; **Wood Pulp** — 3rd consecutive month; **Alcohols** — 3rd consecutive month; **Ethylene** — 4th consecutive month (used heavily in making ethylene oxide, plastic resins, and glycols); **Ethylene Glycol** — 2nd time in 3 months (used heavily in making antifreeze, brake fluid, plastic paint, and ink); **Methanol** — After being reported up in price for 3rd consecutive month in April 1991 (used heavily as a solvent, a motor fuel additive, and in synthesizing other chemicals); **Phenol** — 3rd consecutive month (used heavily in making phenolic resins); **Phthalic Anhydride** — 2nd time in 4 months (used heavily in making artificial resins, benzoic acid, and phthalates); **Plastic Resins** — 3rd consecutive month; **Plastic Products; Polyethylene** — 3rd consecutive month (used heavily in making plastic materials); **Polypropylene** — 5th consecutive month (used heavily in making plastic fabric, yarns, carpets, and packaging materials); **Polystyrene** — 4th consecutive month; **Propylene** — 4th consecutive month (used heavily in making polypropylene plastic and acetone, isopropyl alcohol, phenol, propylene oxide, and other chemicals); **Styrene** — 6th consecutive month; **Coal; Fuel Oil** — 4th consecutive month; **Natural Gas** — 5th consecutive month; **Lube Additives** — 2nd time in 3 months; **Wax; Glass** — 2nd time in 3 months; **Corn; Sugar** — 9th time in 10 months.

BUYING POLICY

Average leadtimes for Capital Expenditures, a lagging indicator, remained the same in May as in April (129 days). The 129 days is the lowest since NAPM began tracking leadtimes in January 1975. The average leadtimes for Production Materials lengthened to 47 days, up from 46 days in April. The average leadtimes for Maintenance, Repair, and Operating (MRO) Supplies also increased in May to 24 days, up from 23 days the previous two months.

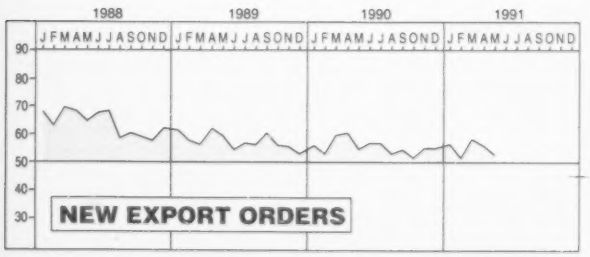


PERCENT REPORTING

Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 mos. and Longer	1 year + Days	Avg. Days
May 1991	14	8	11	24	32	11	129
April 1991	12	9	16	19	33	11	129
March 1991	12	8	12	23	32	13	135
February 1991	12	8	13	21	34	12	134

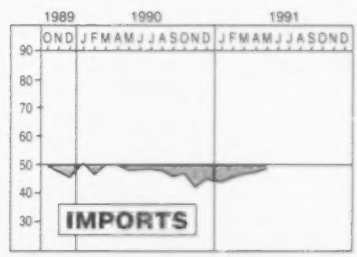
Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 mos. and Longer	1 year + Days	Avg. Days
May 1991	21	40	27	8	2	2	47
April 1991	18	42	26	11	2	1	46
March 1991	19	40	25	13	2	1	47
February 1991	21	40	25	10	2	2	48

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 mos. and Longer	1 year + Days	Avg. Days
May 1991	45	43	7	5	0	0	24
April 1991	47	40	10	3	0	0	23
March 1991	46	41	10	3	0	0	23
February 1991	41	45	12	2	0	0	25



New Export Orders continued to grow in May, although at a lesser rate of growth than in the previous two months. The New Export Orders Index, not seasonally adjusted, was 53.0% in May, down from 56.5% in April. The percentage of members exporting increased to 78, up from 75 in April and March 1991.

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
May 1991	78	18	70	12	+ 6	53.0
April 1991	75	22	69	9	+13	56.5
March 1991	75	25	67	8	+17	58.5
February 1991	77	19	66	15	+ 4	52.0



Imports declined once again in May, for the 13th consecutive month. The Imports Index, not seasonally adjusted, registered 48.0%, up from 47.0% in April and March. The percentage of members importing in May remained the same as last month (77).

Imports	%Exporting	%Better	%Same	%Worse	Net	Index
May 1991	77	10	76	14	-4	48.0
April 1991	77	9	76	15	-6	47.0
March 1991	76	10	74	16	-6	47.0
February 1991	76	12	68	20	-8	46.0

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured [New Orders, New Export Orders, Imports, Production, Supplier Deliveries (formerly Vendor Deliveries), Inventories, Employment and Prices], this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

Responses to Buying Policy reflect the percent reporting the current months lead time, the approximate weighted number of days ahead for which commitments are made for Production Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.

Report On Business®

Manufacturing Economy Grows in June; PMI Surges to 50.9%; Production and New Orders up Sharply

JUNE REPORT

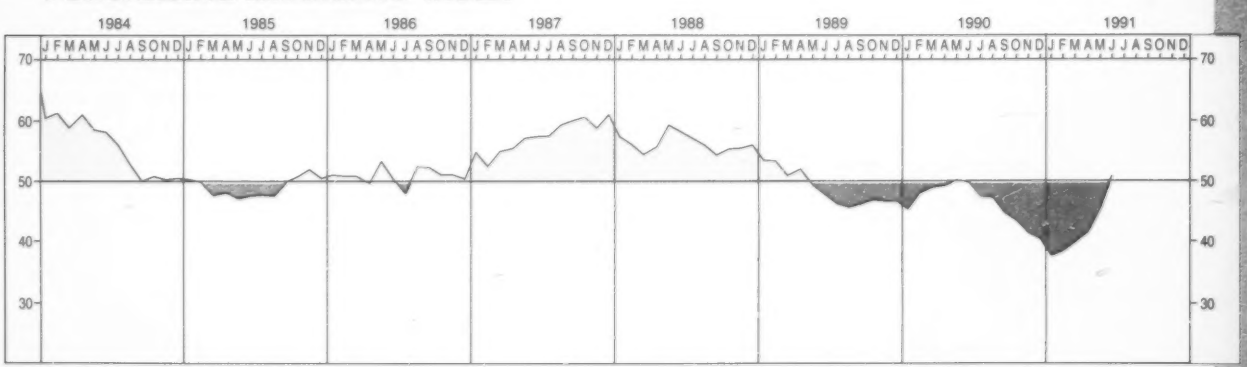
Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of corporate purchasing, Pitney Bowes, Inc.

The manufacturing economy grew in June, ending 12 consecutive months of declines, say the nation's purchasing executives in their latest **Report on Business.** Production also grew in June for the first time since July 1990. New Orders increased sharply for the second consecutive month. New Export Orders also expanded in June at a greater rate than in May. Imports continued to decline for the 14th consecutive month.

The Employment Index declined in June for the 29th consecutive month, but at the lowest rate of decline in 10 months. The Supplier Deliveries Index declined for the 10th consecutive month, but at the lowest rate of decline since November 1990. The Inventories Index declined in June for the 31st consecutive month and is at the lowest level since January 1983. Prices declined in June for the sixth consecutive month although the rate of decline was less for the second consecutive month. Declines in the Producer Price Index and small increases in the Consumer Price Index should continue for several months.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of corporate purchasing at Pitney Bowes, Inc. Said Bretz, "With the Purchasing Managers' Index over 50%, the recession is essentially over for the manufacturing sector as well as the overall economy. The continued sharp increase in the engine of growth, New Orders, virtually assures continued growth in Production over the months ahead. With the Inventories Index at the lowest level since January 1983 (which was the second month after the previous recession ended), growth in inventory purchases will most likely provide further aid to the infant economic recovery."

PURCHASING MANAGERS' INDEX

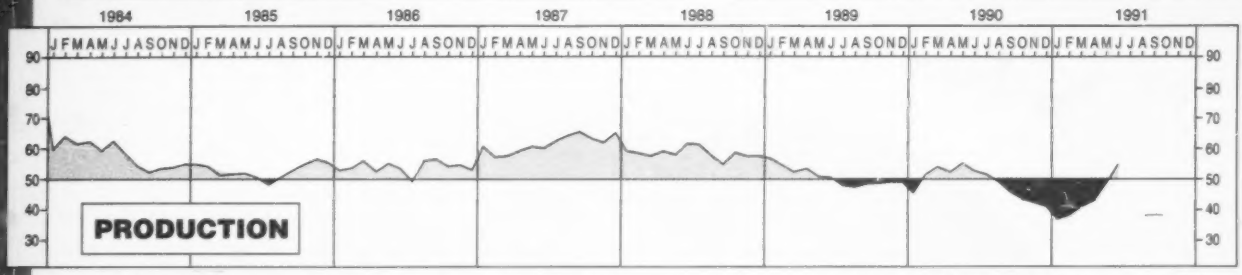


PURCHASING MANAGERS' INDEX (PMI)

June '90	49.9	January '91	37.7
July '90	47.6	February '91	38.5
August '90	47.4	March '91	40.0
September '90	44.9	April '91	42.1
October '90	43.6	May '91	45.4
November '90	41.6	June '91	50.9
December '90	40.5		

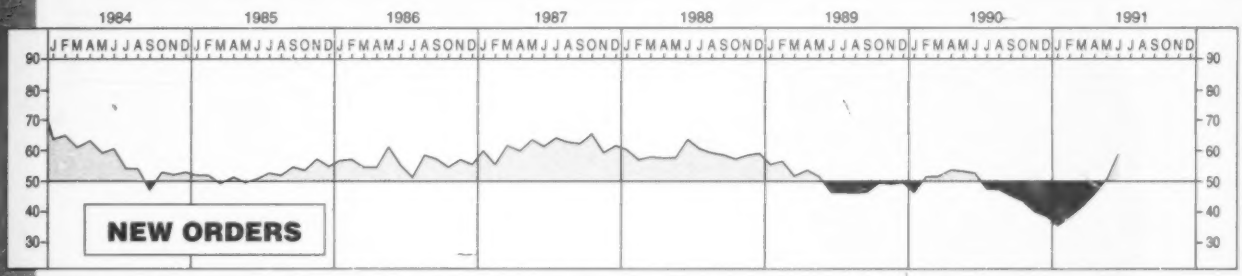
The Purchasing Managers' Index (PMI) rose to 50.9% in June, up sharply from 45.4% in May. June marks the fifth consecutive month the PMI has increased from the previous month and the first time it has registered over 50% since May 1990 (50.1%). A reading above 50% indicates that the manufacturing economy is generally expanding; below 50%, that it is generally declining. Bretz added, "This recession was shorter and less severe than the previous recession. This recession registered 12 months under 50% compared to 19 months in the 1981-82 recession. Also, during this current recession, the PMI registered under 44% for 7 months, which is generally indicative of a decline in the overall economy, compared to 16 months in the 1981-82 recession. The PMI averaged 43.3% in the recent recession compared to 40.0% in the 1981-82 recession. The low point reached in the recent recession was 37.7% compared to 35.5% in the 1981-82 recession. If the PMI remains unchanged at the June level for the balance of the year, then past experience indicates this would be consistent with real GNP growth of approximately 0.9% for all of 1991."

BUSINESS



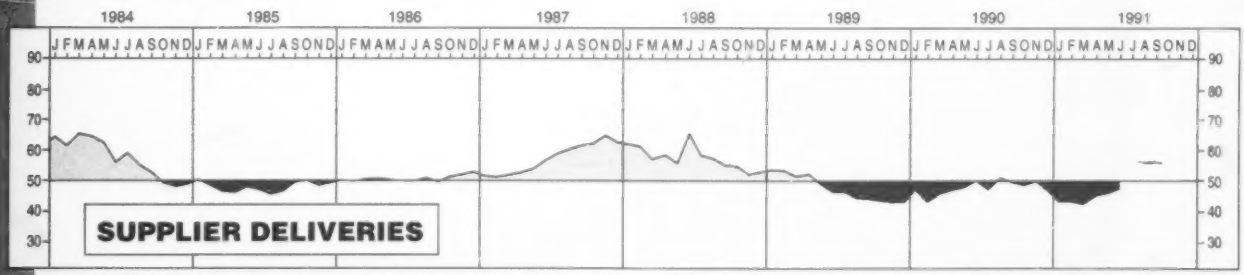
The Production Index in June ended 10 consecutive monthly declines. The Index rose to 55.0%, up sharply from 48.8% in May, largely as a consequence of the significant increase in New Orders in May and June. The index was the highest in a year (May 1990, 55.2%) and the first month above 50% (generally indicative of growth) since July 1990 (51.6%). The sharp increase in New Orders in June should assure continued growth in Production in the months ahead.

Production	%Better	%Same	%Worse	Net	Index
June 1991	31	51	18	+13	55.0
May 1991	21	57	22	-1	48.8
April 1991	17	60	23	-6	43.1
March 1991	15	54	31	-16	41.0



The New Orders Index rose in June to 59.1%, up sharply from 50.6% in May, and is the highest since August 1988 (59.2%). The increase of 8.5 points is the largest one-month increase since the 10.3 increase from January to February 1983, which were the second and third months after the November 1982 trough of the previous recession. The 1983 surge in New Orders resulted in significant increases in Production and the June increase should do likewise.

New Orders	%Better	%Same	%Worse	Net	Index
June 1991	38	42	20	+18	59.1
May 1991	28	47	25	+3	50.6
April 1991	26	49	25	+1	45.9
March 1991	20	47	33	-13	41.5



The Supplier Deliveries Index declined in June for the 10th straight month, although the rate of decline was less for the third consecutive month. The failure of this index to rise above 50% can most likely be attributed to the fact that purchasers have not stopped reducing their inventory levels, as confirmed by the low Inventories Index.

Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
June 1991	4	86	10	-6	47.5
May 1991	3	87	10	-7	46.0
April 1991	3	84	13	-10	45.1
March 1991	3	81	16	-13	42.4

IN SHORT SUPPLY

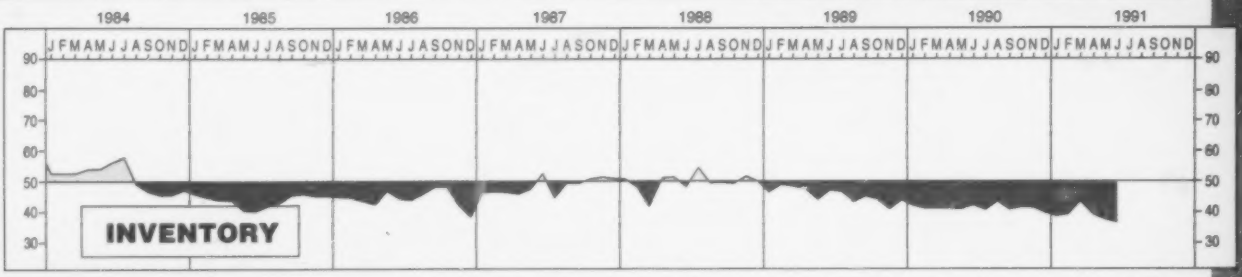
Bearings - 34th time in 35 months, generally only in military specification grade; **Ethanolamine** - 2nd consecutive month (used heavily in polishes, hair waving solutions, a dispersing agent, and in the manufacture of antibiotics); **Caustic Soda/Soda Ash** - 49th consecutive month (used heavily in paper making, petroleum refining, and soap making); **Tall Oil-Crude and Fatty Acid** - Used in making soap, greases, paint, linoleum, rubber formulations, and cutting oils; **Lumber** - Essentially only in the Northwestern U.S., where conservationists' efforts have been successful in reducing the Douglas Fir acreage the government will allow to be cut, causing shortages in lumber, chips for paper mills, and threatened reduction of log exports to the Pacific Rim; **Acetate Filter**.

UP IN PRICE

Silver; **Engines**; **Acetone**; **Guaifenesin** - Used heavily in cough remedies as an expectorant and a muscle relaxant; **Phosphate Chemicals** - Used heavily in a variety of chemicals, pharmaceuticals, detergent, paper and food processing; **Rosin-based Chemicals** - 3rd consecutive month (used in making varnish, varnish and paint dryers, inks, soap, waxes, polishes, floor coverings, paper, plastic, and sizing); **Xylene** - Used heavily in making benzoic acid, phthalic anhydride, polyester fibers, and dyes; **Lumber**; **Plywood**; **1 Megabyte DRAMS** - 5th consecutive month; **Silicon Wafers**; **High Fructose Corn Syrup** - 3rd consecutive month; **Apple Juice Concentrate** - 3rd consecutive month; **Orange Juice**; **Sugar** - After being reported down in price in May for 9th time in 10 months.

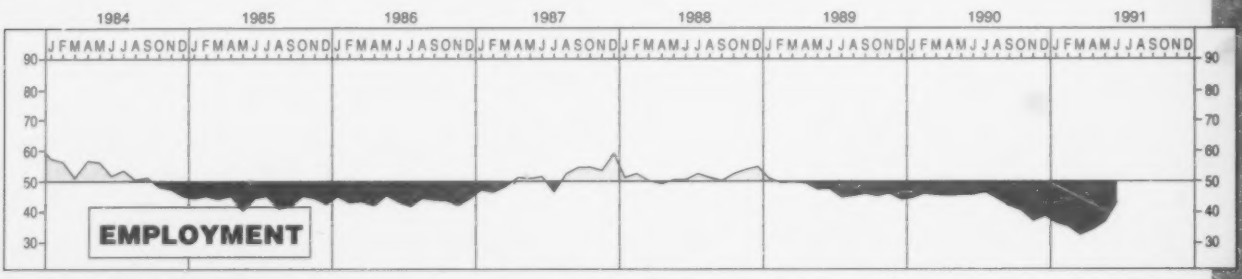
DOWN IN PRICE

Aluminum - 8th consecutive month; **Aluminum Products**; **Brass** - 6th time in 8 months; **Copper** - 8th consecutive month; **Ferro Alloys** - Used heavily as a coating for welding rods; **Lead** - 2nd time in 4 months; **Magnesium** - 5th consecutive month; **Nickel** - After being reported up in price in May for 2nd consecutive month; **Platinum** - 2nd time in 3 months; **Rhodium** - 3rd time in 4 months (used heavily as an alloy with platinum and as a corrosion-resistant electroplate for protection of



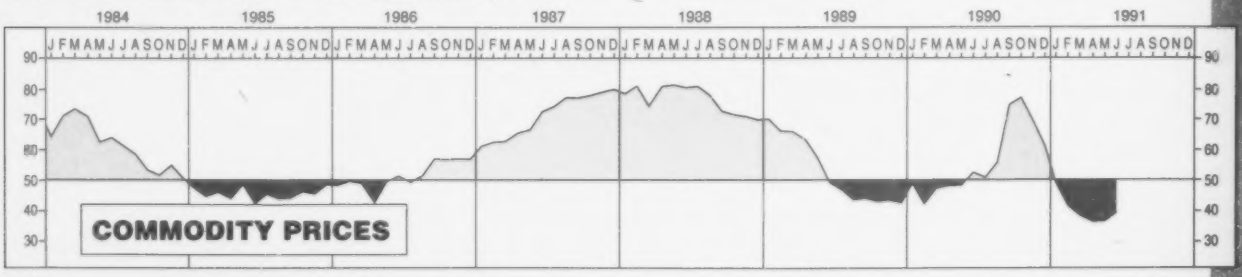
Inventories declined in June for the 31st consecutive month. The Inventories Index fell to 36.7%, down from 37.5% in May, and is the lowest since January 1983 (36.3%). It is not likely that Inventories will decline at a greater rate much longer, if at all. When the rate of decline begins to lessen, purchases will increase at a greater rate than production and, thus, provide even more growth to the economy.

Inventories	%Higher	%Same	%Lower	Net	Index
June 1991	14	47	39	-25	36.7
May 1991	13	49	38	-25	37.5
April 1991	14	53	33	-19	39.0
March 1991	18	55	27	-9	43.5



Employment declined in June for the 29th consecutive month, although at a significantly lesser rate of decline. The Employment Index rose to 43.3%, up from 37.0% in May, and a recession low of 32.7% in March. The index at 43.3% is the lowest rate of decline since August 1990 (44.4%). In April it was suggested that the bottom of the decline in manufacturing employment was reached in March and April was the first month in an upward trend. The June index confirms this trend which should continue as Employment follows the improving economy.

Employment	%Higher	%Same	%Lower	Net	Index
June 1991	14	61	25	-11	43.3
May 1991	5	65	30	-25	37.0
April 1991	8	57	35	-27	34.4
March 1991	5	58	37	-32	32.7



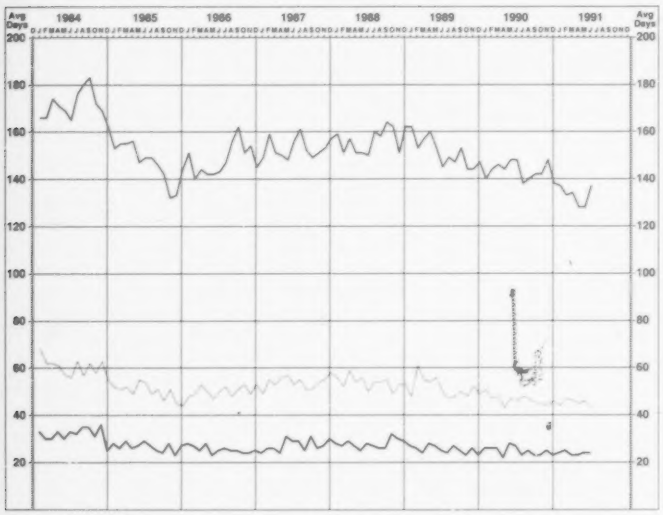
Prices declined in June for the sixth consecutive month. The Price Index rose for the second straight month to 39.5%, up from 36.9% in May. As indicated in April, the index will most likely begin to rise, as prices lag the economy. Nevertheless, it is again noteworthy that Caustic Soda/Soda Ash was reported down in price in June after being reported higher in price for April for the 53rd consecutive month.

Prices	%Higher	%Same	%Lower	Net	Index
June 1991	6	66	28	-22	39.5
May 1991	5	64	31	-26	36.9
April 1991	10	60	30	-20	36.3
March 1991	8	64	28	-20	38.6

silverware from tarnishing); **Steel** - 5th consecutive month; **Steel Scrap** - 8th consecutive month; **Steel Plate**; **Zinc** - 11th consecutive month (used heavily in galvanizing sheet iron, as an ingredient of alloys such as brass and bronze, as a protective coating to prevent corrosion of other metals, for electrical apparatus, dry cell batteries, building materials, and automotive equipment; **Bearings** - 7th time in 8 months; **Uncoated Offset Paper** - 6th consecutive month; **Corrugated Shipping Containers** - 16th time in 17 months; **Linerboard** - 4th consecutive month; **Wood Pulp** - 4th consecutive month (used heavily in making all grades of paper and linerboard); **Caustic Soda/Soda Ash** - After being reported up in price in April for 53rd consecutive month (used heavily in paper making, petroleum refining, and soap making); **Ethylene** - 5th consecutive month (used heavily in making ethylene oxide, plastic resins, and glycols); **Ethylene Glycol** - 3rd time in 4 months (used heavily in making antifreeze, brake fluid, plastic paint, and ink); **Methanol** - 2nd consecutive month (used heavily as a solvent, a motor fuel additive, and in synthesizing other chemicals); **Phthalic Anhydride** - 3rd time in 5 months (used heavily in making artificial resins, benzoic acid, and phthalates); **Titanium Dioxide** - 4th time in 5 months (a lead-free pigment used as a whitener in coatings, paints, paper, and other industrial applications); **Toluene** - 6th time in 7 months (used heavily in making explosives, dyes, and benzoic acid, as a solvent in paint and as a gasoline additive; **Plastic Resins** - 4th consecutive month; **Plastic Products** - 2nd consecutive month; **Polyethylene** - 4th consecutive month; **Polypropylene** - 6th consecutive month; **Polystyrene** - 5th consecutive month (used heavily in making plastic foam packaging, cups, and plates); **Polyvinyl Chloride (PVC)** - 2nd time in 3 months (used in wire and cable coating, vinyl siding, pipe tubing, textile finishing, belting, and auto interiors); **Propylene** - 5th consecutive month (used heavily in making polypropylene plastic and acetone, isopropyl alcohol, phenol, propylene oxide, and other chemicals); **Styrene** - 7th consecutive month (used chiefly in making polystyrene, synthetic rubber, latex, polyester resins, and plastic products such as dinnerware, paneling, boat hulls, etc.); **Coal** - 2nd consecutive month; **Fuel Oil** - 5th consecutive month; **Natural Gas** - 6th consecutive month; **Corn** - 2nd consecutive month; **Tomato Paste**.

BUYING POLICY

Average leadtimes for Capital Expenditures lengthened significantly in June while they shrunk for Production Materials and stayed the same for Maintenance, Repair, and Operating (MRO) Supplies. The average leadtimes for Capital Expenditures, a lagging indicator, increased in June to 138 days, up sharply from 129 days in both April and May, which was the lowest since NAPM began tracking leadtimes in January 1975. The average leadtimes for Production Materials fell to 44 days, down from 47 days in May and adding confirmation that purchasers have not stopped reducing their inventories. The average leadtimes for MRO Supplies in June remained the same as in May (24 days).

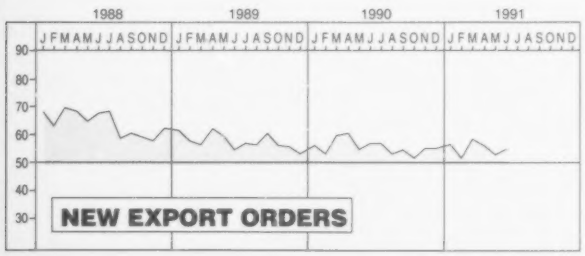


PERCENT REPORTING

Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 mos. and Longer	1 year + Days	Avg. Days
June 1991	11	8	12	24	31	14	138
May 1991	14	8	11	24	32	11	129
April 1991	12	9	16	19	33	11	129
March 1991	12	8	12	23	32	13	135

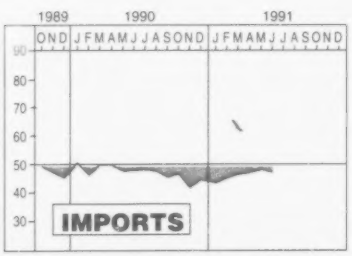
Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 mos. and Longer	1 year + Days	Avg. Days
June 1991	19	44	26	8	2	1	44
May 1991	21	40	27	8	2	2	47
April 1991	18	42	26	11	2	1	46
March 1991	19	40	25	13	2	1	47

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 mos. and Longer	1 year + Days	Avg. Days
June 1991	42	45	10	3	0	0	24
May 1991	45	43	7	5	0	0	24
April 1991	47	40	10	3	0	0	23
March 1991	46	41	10	3	0	0	23



New Export Orders continued to grow in June at a greater rate than in May. The New Export Orders Index, not seasonally adjusted, registered 55.0% in June, up from 53.0% in May. The percentage of members exporting remained at 78, which along with May, was the most to report exporting some of their products since we began surveying New Export Orders in January 1988.

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
June 1991	78	24	62	14	+10	55.0
May 1991	78	18	70	12	+ 6	53.0
April 1991	75	22	69	9	+13	56.5
March 1991	75	25	67	8	+17	58.5



Imports declined for the 14th consecutive month. The Imports Index, not seasonally adjusted, was 47.5%, which is down slightly from 48.0% in May. The percentage of members importing remained the same as last two months (77).

Imports	%Exporting	%Better	%Same	%Worse	Net	Index
June 1991	77	9	77	14	-5	47.5
May 1991	77	10	76	14	-4	48.0
April 1991	77	9	76	15	-6	47.0
March 1991	76	10	74	16	-6	47.0

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are representad on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured [New Orders, New Export Orders, Imports, Production, Supplier Deliveries (formerly Vendor Deliveries), Inventories, Employment and Prices], this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

Responses to Buying Policy reflect the percent reporting the current months lead time, the approximate weighted number of days ahead for which commitments are made for Production Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.

Economy Continues to Grow in July; PMI Rises to 51.8%; Production up Sharply

JULY REPORT

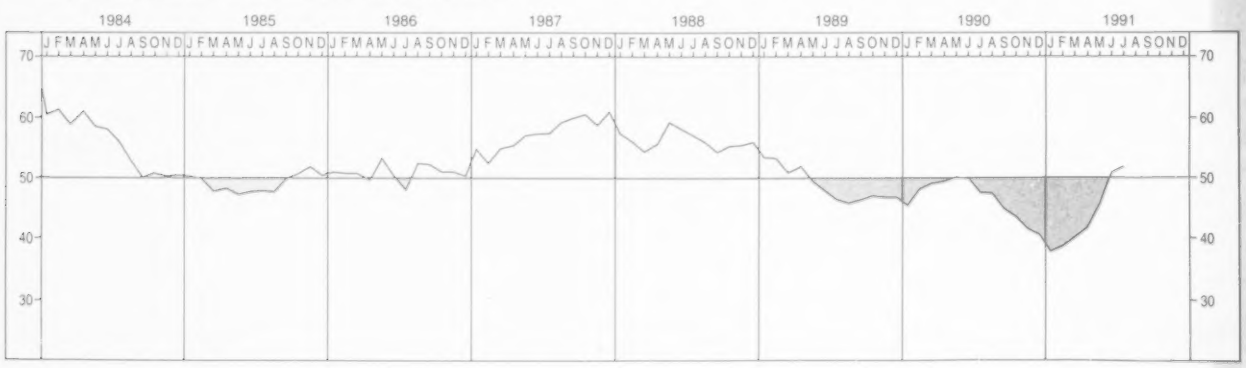
Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of corporate purchasing, Pitney Bowes, Inc.

The manufacturing economy grew in July, for the second consecutive month, say the nation's purchasing executives in their latest **Report on Business.** Production expanded sharply for the second consecutive month. New Orders increased in July for the third consecutive month, but at a lesser rate of growth than in June. New Export Orders also continued to grow in July although at a lower rate of growth than in June. Imports continued to decline for the 15th consecutive month.

The Employment Index declined in July for the 30th consecutive month. The Supplier Deliveries Index increased in July, indicating slower Supplier Deliveries for the first time since August 1990. The Inventories Index declined in July for the 32nd consecutive month, although at a lesser rate of decline than in the previous three months. Prices declined again for the seventh consecutive month, at a slightly greater pace than in June. The Producer Price Index should continue to post declines and the Consumer Price Index should continue to register smaller increases for several months.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of corporate purchasing at Pitney Bowes, Inc. Said Bretz, "The economy entered the third quarter by continuing the neophyte recovery. Although Production rose sharply in July, the growth in New Orders was not as rapid as in the past two months. Nevertheless, with New Orders still growing and Inventories at relatively low levels, the economy should continue to grow at a moderate, if not robust pace over the months ahead."

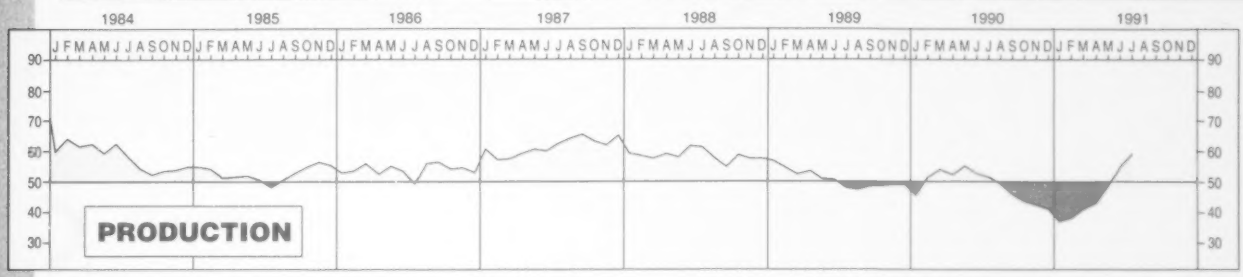
PURCHASING MANAGERS' INDEX



PURCHASING MANAGERS' INDEX (PMI)

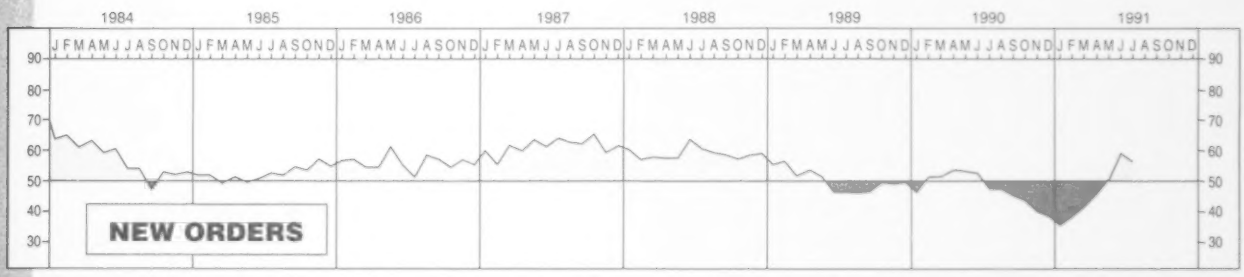
July '90	47.6	February '91	38.5
August '90	47.4	March '91	40.0
September '90	44.9	April '91	42.1
October '90	43.6	May '91	45.4
November '90	41.6	June '91	50.9
December '90	40.5	July '91	51.8
January '91	37.7		

The Purchasing Managers' Index (PMI) rose to 51.8%, up from 50.9% in June. This is the sixth consecutive month the PMI has increased from the previous month and the second consecutive month it has registered over 50%, since slipping below in June 1990 (49.9%). A reading above 50% indicates that the manufacturing economy is generally expanding; below 50%, that it is generally declining. Bretz added, "The PMI averaged 43.8% for the first seven months of 1991. Past experience indicates this would be consistent with zero growth in the overall economy. However, if the PMI remains unchanged at the July level for the balance of the year, then past experience also indicates this would be consistent with real GNP growth of approximately 1% for all of 1991."



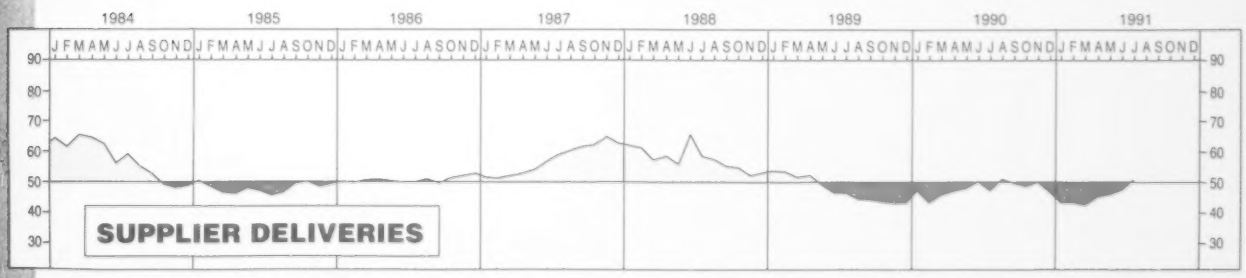
Production grew in July for the second consecutive month after declining in the previous 10 months. The Production Index rose to 59.5%, up from 55.0% in June, to its highest level since July 1988 (61.2%). Given the sustained growth in New Orders in July, growth in Production should also continue.

Production	%Better	%Same	%Worse	Net	Index
July 1991	29	53	18	+11	59.5
June 1991	31	51	18	+13	55.0
May 1991	21	57	22	-1	48.8
April 1991	17	60	23	-6	43.1



New Orders increased in July for the third consecutive month, although at a lesser rate than in June. The New Orders Index fell to 56.3%, down from 59.1% last month. Nevertheless, the increase in New Orders is more than sufficient to create continued growth in Production and the economy in the months ahead.

New Orders	%Better	%Same	%Worse	Net	Index
July 1991	31	46	23	+8	56.3
June 1991	38	42	20	+18	59.1
May 1991	28	47	25	+3	50.6
April 1991	26	49	25	+1	45.9



The Supplier Deliveries Index increased in July after 10 consecutive months of decline. The increase to 50.8% confirms the economy is growing and that suppliers are making slower deliveries. The increase in the index also suggests inventories are not being reduced at as great a rate as in the previous three months.

Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
July 1991	7	88	5	+2	50.8
June 1991	4	86	10	-6	47.5
May 1991	3	87	10	-7	46.0
April 1991	3	84	13	-10	45.1

IN SHORT SUPPLY

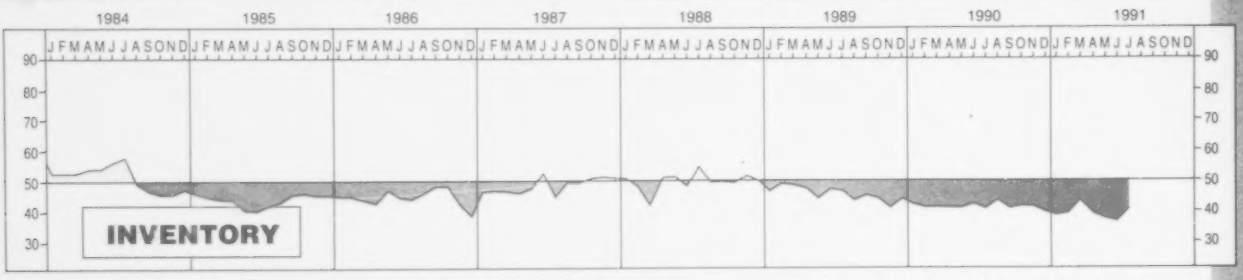
Bearings - 35th time in 36 months, generally only in military specification grade; **Caustic Soda/Soda Ash** - 50th consecutive month (used heavily in paper making, petroleum refining, and soap making); **Lumber** - 2nd consecutive month, essentially only in the Northwestern U.S., where conservationists' efforts have been successful in reducing the Douglas Fir acreage the government will allow to be cut, causing shortages in lumber, chips for paper mills, and threatened reduction of log exports to the Pacific Rim.

UP IN PRICE

Silver - 2nd consecutive month; **Tin; Rosin-based Chemicals** - 4th consecutive month; **Textile Dyes** - Used to color textiles; **Polyvinyl Chloride Resin** - Used in making Polyvinyl Chloride (PVC); **Lumber** - 2nd consecutive month; **Solid Bleached Sulfate (SBS); Silica; Lube Additives** - After being reported down in price in May for 2nd time in 3 months; **Turkey Meat; High Fructose Corn Syrup** - 4th consecutive month; **Orange Juice** - 2nd consecutive month; **Sugar** - 2nd consecutive month, after being reported down in price in May for 9th time in 10 months (used heavily in food and beverage processing).

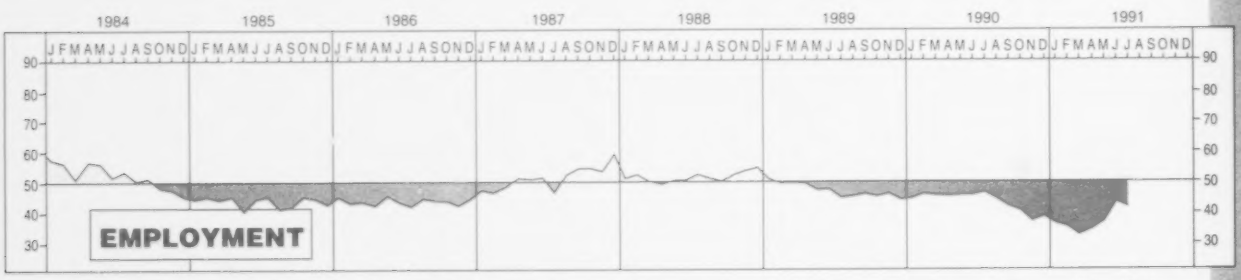
DOWN IN PRICE

Aluminum - 9th consecutive month; **Bronze; Copper** - 9th consecutive month, some reports of price increases; **Magnesium** - 6th consecutive month; **Nickel** - 2nd consecutive month, after being reported up in price in May for 2nd consecutive month; **Silicon Metal; Steel** - 6th consecutive month; **Steel Scrap** - 9th consecutive month; **Steel Pipe; Zinc** - 12th consecutive month; **Uncoated Offset Paper**



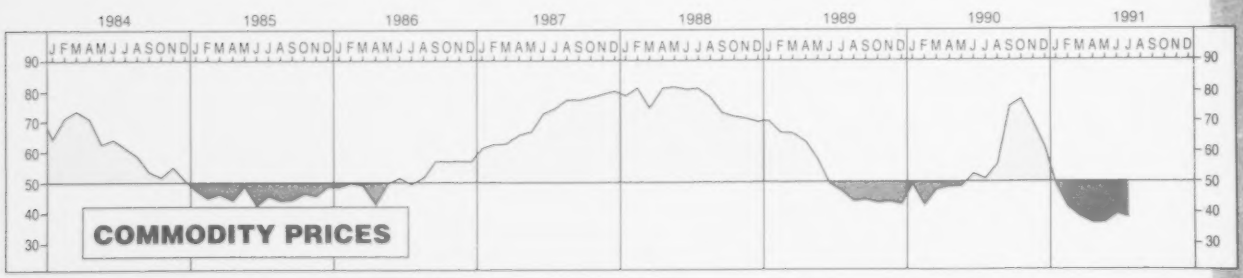
Inventories declined in July for the 32nd consecutive month, although the rate of decline was the lowest since March 1991. The Inventories Index rose to 40.7%, up from 36.7% in June, which was the lowest since January 1983 (36.3%). Reductions in the rate of inventory decline should continue and this will provide further growth to the economy.

Inventories	%Higher	%Same	%Lower	Net	Index
July 1991	12	51	37	-25	40.7
June 1991	14	47	39	-25	36.7
May 1991	13	49	38	-25	37.5
April 1991	14	53	33	-19	39.0



Employment, a lagging indicator, declined in July for the 30th consecutive month. The Employment Index fell to 41.7% in July, down from 43.3% in June. As in past economic recoveries, Employment will be one of the last indicators to turn positive and grow.

Employment	%Higher	%Same	%Lower	Net	Index
July 1991	12	62	26	-14	41.7
June 1991	14	61	25	-11	43.3
May 1991	5	65	30	-25	37.0
April 1991	8	57	35	-27	34.4



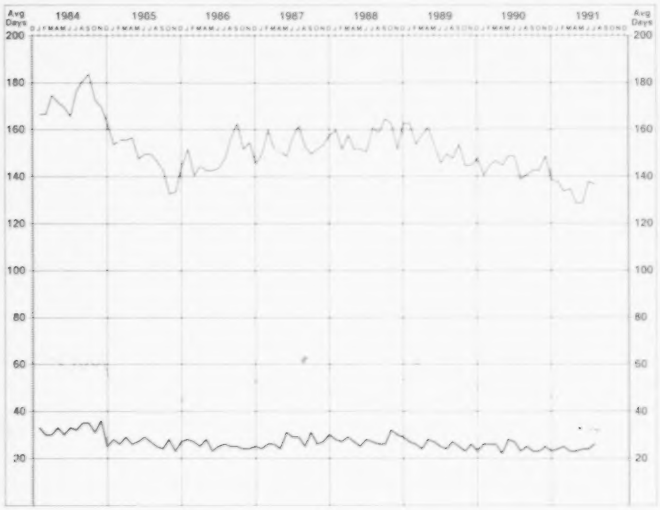
Prices, a lagging indicator, continued to decline in July for the seventh consecutive month. The Price Index slipped to 38.3% in July, down from 39.5% last month. Members reported resisting price increases being proposed by suppliers. It is more likely that the Price Index will increase rather than decrease as the economy continues to improve in the months ahead.

Prices	%Higher	%Same	%Lower	Net	Index
July 1991	5	66	29	-24	38.3
June 1991	6	66	28	-22	39.5
May 1991	5	64	31	-26	36.9
April 1991	10	60	30	-20	36.3

- 7th consecutive month; **Corrugated Shipping Containers** - 17th time in 18 months; **Wood Pulp** - 5th consecutive month; **Cotton Fabric** - After being reported up in price in May for 5th consecutive month; **Leather; Acetone** - After being reported up in price in June; **Benzene; Ethylene** - 6th consecutive month (used heavily in making ethylene oxide, plastic resins, and glycols); **Ethylene Derivatives; Glycerine** - 5th time in seven months; **Methanol** - 3rd consecutive month, after being reported up in price for 3rd consecutive month in April 1991; **Phthalic Anhydride** - 4th time in 6 months (used heavily in making artificial resins, benzoic acid, and phthalates); **Sodium Chlorate** - Used heavily in papermaking and dyeing; **Sulfur; Toluene** - 7th time in 8 months (used heavily in making explosives, dyes, and benzoic acid, as a solvent in paint and as a gasoline additive); **Xylene** - 6th time in 8 months; **Plastic Resins** - 5th consecutive month; **Plastic Products** - 3rd consecutive month; **Polyethylene** - 5th consecutive month (used heavily in making plastic packaging materials, kitchenware, tank and pipe linings paper coatings, and textile stiffeners); **Polypropylene** - 7th consecutive month; **Propylene** - 6th consecutive month (used heavily in making polypropylene plastic and acetone, isopropyl alcohol, phenol, propylene oxide, and other chemicals) **Styrene** - 8th consecutive month; **Capacitors; 1 Megabyte DRAMS** - After being reported up in price in June for 5th consecutive month; **4 Megabyte DRAMS; Bottle Glass** - 3rd time in 5 months; **Diesel Fuel; Gasoline; Natural Gas** - 7th consecutive month; **Propane; Corn** - 3rd consecutive month, after being reported up in price for the 3rd consecutive month in April 1991; **Black Pepper** - Used in food processing; **Apple Juice** - After being reported up in price in June; **Tomato Paste** - 2nd consecutive month (used heavily in food processing).

BUYING POLICY

Leadtimes for Capital Expenditures changed only slightly in July, moving down to 137 days from 138 days in June. This lagging indicator was one of the last to turn down during the recession and will probably be one of the last to turn up in the economic recovery. Average leadtimes for Production Materials lengthened in July to 47 days, up from 44 days in June, but the same as the February to May 1991 average. Leadtimes for Maintenance, Repair, and Operating (MRO) Supplies increased to 26 days in July, up from 24 days in both June and May, and the most since June 1990 (27 days).

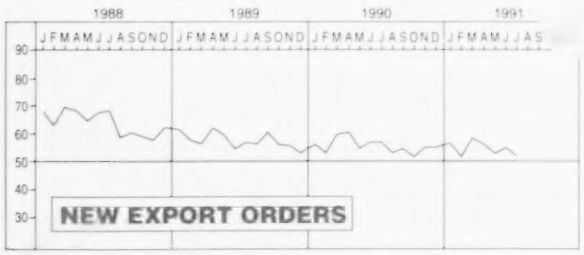


PERCENT REPORTING

Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 mos. and Longer	1 year + Days	Avg. Days
July 1991	12	6	15	23	30	14	137
June 1991	11	8	12	24	31	14	138
May 1991	14	8	11	24	32	11	129
April 1991	12	9	16	19	33	11	129

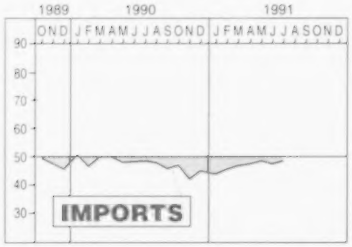
Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 mos. and Longer	1 year + Days	Avg. Days
July 1991	19	43	28	6	2	2	47
June 1991	19	44	26	8	2	1	44
May 1991	21	40	27	8	2	2	47
April 1991	18	42	26	11	2	1	46

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 mos. and Longer	1 year + Days	Avg. Days
July 1991	41	45	11	2	1	0	26
June 1991	42	45	10	3	0	0	24
May 1991	45	43	7	5	0	0	24
April 1991	47	40	10	3	0	0	23



New Export Orders continued to expand in July. The New Export Orders Index, not seasonally adjusted, dropped to 52.5%, down from 55.0% last month, and the lowest since February 1991 (52.0%). Members exporting remained at 78% for the third straight month.

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
July 1991	78	18	69	13	+5	52.5
June 1991	78	24	62	14	+10	55.0
May 1991	78	18	70	12	+6	53.0
April 1991	75	22	69	9	+13	56.5



Imports declined for the 15th consecutive month. The Imports Index, not seasonally adjusted, rose to 48.0%, up slightly from 47.5% in June, but the same as in May. The percentage of members importing was 78, which was slightly higher than the past three months (77%).

Imports	%Importing	%Higher	%Same	%Lower	Net	Index
July 1991	78	11	74	15	-4	48.0
June 1991	77	9	77	14	-5	47.5
May 1991	77	10	76	14	-4	48.0
April 1991	77	9	76	15	-6	47.0

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured [New Orders, New Export Orders, Imports, Production, Supplier Deliveries, Inventories, Employment and Prices], this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50% that the economy is generally declining. The distance from 50% is indicative of the strength of expansion or decline.

Responses to Buying Policy reflect the percent reporting the current months lead time, the approximate weighted number of days ahead for which commitments are made for Production Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.

Report On Business®

Economy Continues Steady Growth; PMI Climbs to 54.8%; New Orders Surge to 63.1%

AUGUST REPORT

Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of corporate purchasing, Pitney Bowes, Inc.

The manufacturing economy expanded in August for the third consecutive month, say the nation's purchasing executives in their latest ***Report on Business.*** Production rose moderately for the third consecutive month. New Orders advanced sharply in August for the fourth consecutive increase. New Export Orders expanded in August at a higher rate of growth than last month. Imports broke a string of 15 consecutive months of decline.

Employment declined in August for the 31st straight month, but at the lowest rate of decline since July 1990. Inventories declined in August for the 33rd consecutive month. The Supplier Deliveries Index declined in August, after increasing in July for the first time since August 1990. Prices declined again for the eighth straight month, although at a significantly lesser rate than in the first half of 1991.

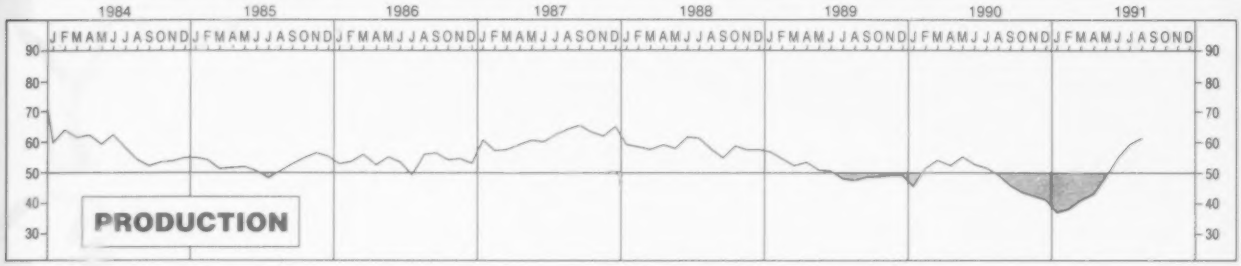
The ***Report*** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of corporate purchasing at Pitney Bowes, Inc. Said Bretz, "The economic recovery galvanized in August. The continued growth in the manufacturing economy was apparently achieved without any growth in Inventory. The sharp rate of growth in New Orders, with a boost from expanding Export Orders, signals continued healthy economic growth for at least the next few months."

PURCHASING MANAGERS' INDEX

PURCHASING MANAGERS' INDEX (PMI)

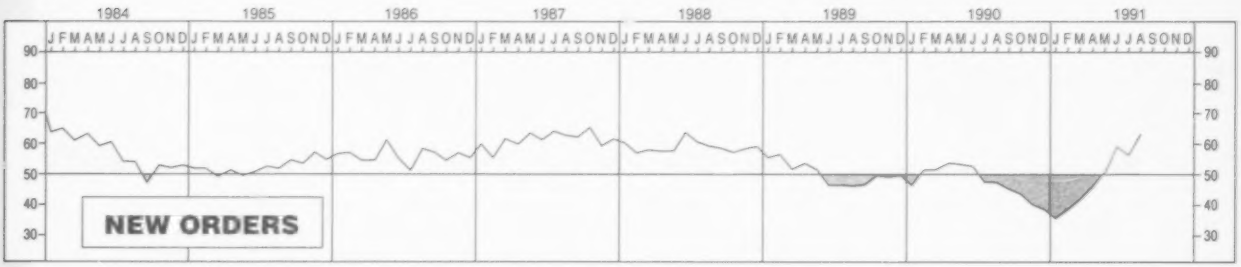
August '90	47.4	March '91	40.0
September '90	44.9	April '91	42.1
October '90	43.6	May '91	45.4
November '90	41.6	June '91	50.9
December '90	40.5	July '91	51.8
January '91	37.7	August '91	54.8
February '91	38.5		

The Purchasing Managers' Index (PMI) rose to 54.8%, up from 51.8% in July, and is the highest since December 1988 (56.0%). The rise marked the seventh consecutive month the PMI has increased from the previous month and the third straight month it has registered over 50%. A reading above 50% indicates that the manufacturing economy is generally expanding; below 50%, that it is generally declining. Bretz added, "The PMI averaged 45.1% for the first eight months of 1991, a rate that past experience indicates would be consistent with +0.4% real growth in the overall economy. However, if the PMI remains unchanged at the August level for the balance of the year, then past experience also indicates this would be consistent with real GNP growth of approximately +1.4% for all of 1991."



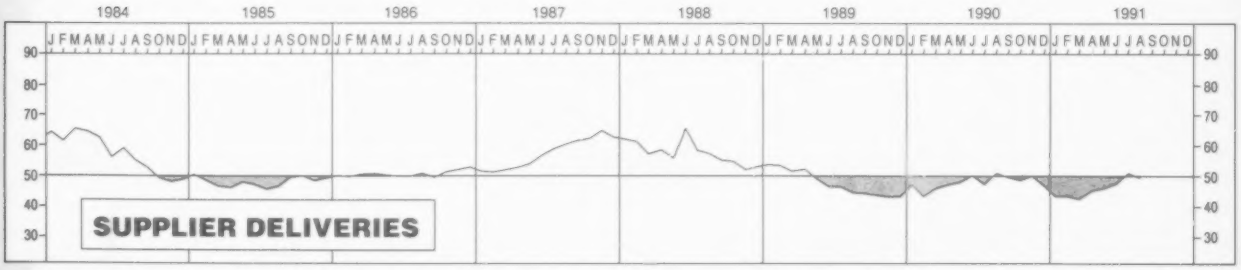
Production continued to grow in August for the third consecutive month. The Production Index rose modestly to 61.4%, up from 59.5% in July, and the highest since June 1988 (61.7%). With a substantial surge in New Orders in August, Production growth should also remain respectable.

Production	%Better	%Same	%Worse	Net	Index
August 1991	34	49	17	+17	61.4
July 1991	29	53	18	+11	59.5
June 1991	31	51	18	+13	55.0
May 1991	21	57	22	-1	48.8



New Orders expanded in August for the fourth straight month. The New Orders Index rose to 63.1%, up substantially from 56.3% in July and the highest rate of growth in over three years (June 1988, 63.6%). The strong growth in New Orders virtually assures continued growth in Production in the next few months.

New Orders	%Better	%Same	%Worse	Net	Index
August 1991	38	45	17	+21	63.1
July 1991	31	46	23	+8	56.3
June 1991	38	42	20	+18	59.1
May 1991	28	47	25	+3	50.6



The Supplier Deliveries Index slipped below 50% in August after reaching this neutral level in July for the first time in 11 months. The Supplier Deliveries Index fell to 49.4%, down from 50.8% last month. This indicates that suppliers are able to meet delivery schedules even though Production is expanding at a brisk rate.

Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
August 1991	5	88	7	-2	49.4
July 1991	7	88	5	+2	50.8
June 1991	4	86	10	-6	47.5
May 1991	3	87	10	-7	46.0

IN SHORT SUPPLY

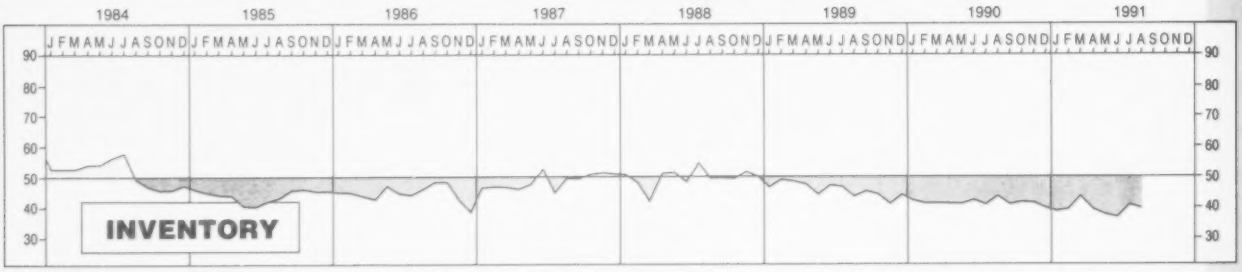
Bearings - 36th time in 37 months, generally only in military specification grade.

UP IN PRICE

Bearings; Steel Valves; Benzene - After being reported down in price in July (used heavily in making medicinal chemicals, dyes, varnishes, lacquers, and resins); **Textile Dyes** - 2nd consecutive month; **Lumber** - 3rd consecutive month, essentially only in the Northwestern U.S., where conservationists' efforts have been successful in reducing the Douglas Fir acreage the government will allow to be cut, causing shortages in lumber, chips for paper mills, and threatened reduction of log exports to the Pacific Rim; **Timber** - 3rd time in 5 months; **Solid Bleached Sulfate (SBS) Paperboard** - 2nd consecutive month; **Uncoated Offset Paper** - After being reported down in price in July for the 7th consecutive month; **Casein; Corn** - After being reported down in price in July for the 3rd consecutive month; **Corn Syrup** - Used in food and beverage processing; **Fuel Oil** - After being reported down in price in June for the 5th consecutive month; **Diesel Fuel** - After being reported down in price in July; **Gasoline** - After being reported down in price in July.

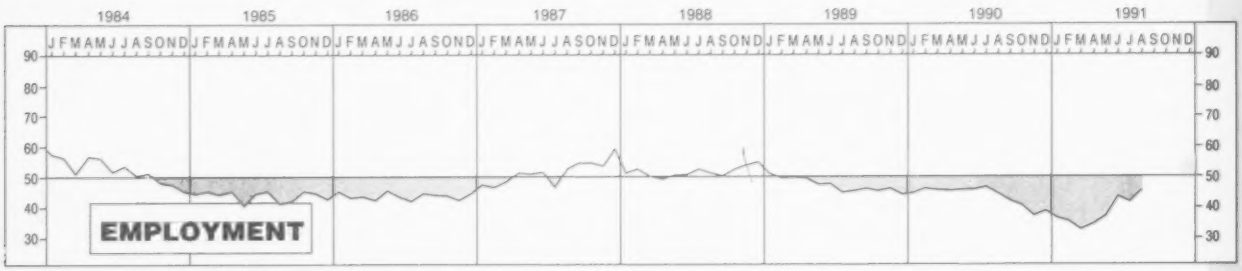
DOWN IN PRICE

Aluminum - 10th consecutive month; **Brass; Copper** - 10th consecutive month, some reports of price increases; **Platinum; Rhodium** - Used heavily as an alloy with platinum and as a corrosion-resistant electroplate for protection of silverware from tarnishing; **Steel** - 7th consecutive month; **Steel Pipe** - 2nd consecutive



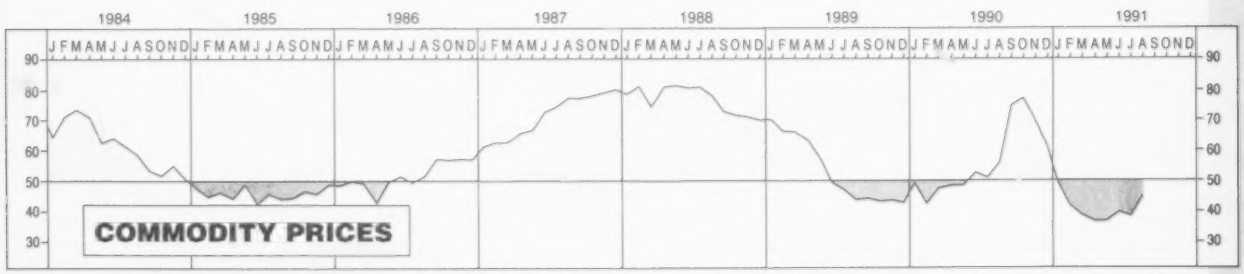
Inventories declined in August for the 33rd consecutive month at a slightly higher rate of decline than last month. The Inventories Index dropped to 39.6%, down from 40.7% in July. The continued decline in Inventories suggests that the growth in the manufacturing economy has taken place with little, if any, extra assistance from Inventory growth.

Inventories	%Higher	%Same	%Lower	Net	Index
August 1991	14	53	33	-19	39.6
July 1991	12	51	37	-25	40.7
June 1991	14	47	39	-25	36.7
May 1991	13	49	38	-25	37.5



Employment, a lagging indicator, continued to decline in August for the 31st consecutive month, although the rate of decline is the lowest in the past year. The Employment Index rose to 45.5%, a healthy increase from 41.7% in July, and the highest since July 1990 (46.6%). Similar increases in the next two months would indicate growth in manufacturing employment by October.

Employment	%Higher	%Same	%Lower	Net	Index
August 1991	12	64	24	-12	45.5
July 1991	12	62	26	-14	41.7
June 1991	14	61	25	-11	43.3
May 1991	5	65	30	-25	37.0



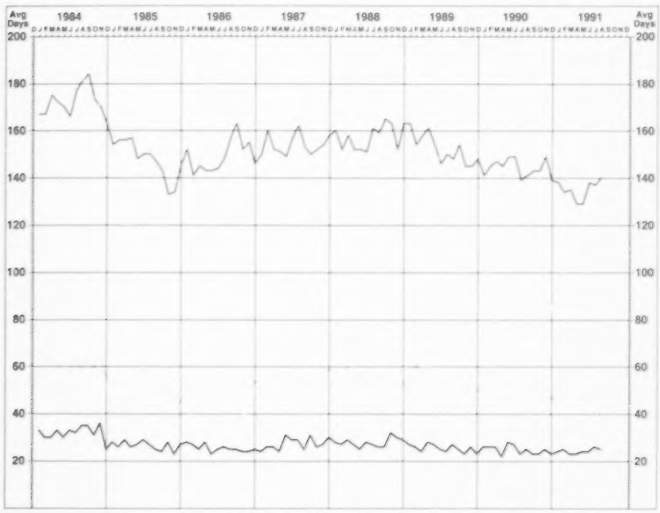
Prices continued to decline in August for the eighth consecutive month, although at the lowest rate of decline in the past six months. The Price Index advanced to 44.9%, up significantly from 38.3% in July, and the highest since January 1991 (49.1%). Numerous purchasers reported resisting announced price increases in September for a variety of basic commodities, including steel, paper, and certain plastic resins.

Prices	%Higher	%Same	%Lower	Net	Index
August 1991	8	69	23	-15	44.9
July 1991	5	66	29	-24	38.3
June 1991	6	66	28	-22	39.5
May 1991	5	64	31	-26	36.9

month; **Zinc** - 13th consecutive month (used heavily in galvanizing sheet iron, as an ingredient of alloys such as brass and bronze, as a protective coating to prevent corrosion of other metals, for electrical apparatus, dry cell batteries, building materials, and automotive equipment); **Linerboard** - 5th time in 6 months; **Corrugated Shipping Containers** - 18th time in 19 months; **Tall Oil-Crude and Fatty Acid** - After being reported up in price in May for 3rd consecutive month (used in making soap, greases, paint, linoleum, rubber formulations, and cutting oils); **Cotton Fabric** - 2nd consecutive month, after being reported up in price in May for 5th consecutive month; **Ethylene** - 7th consecutive month; **Glycerine** - 6th time in 8 months; **Hydrogen Peroxide; Maleic Anhydride** - Used heavily in making pharmaceuticals, agricultural chemicals, dye, intermediates and alkyd-type resins; **Methanol** - 4th consecutive month; **Phenol** - Used heavily in making phenolic resins; **Phthalic Anhydride** - 5th time in 7 months (used heavily in making artificial resins, benzoic acid, and phthalates); **Sulfur** - 2nd consecutive month; **Sulfuric Acid** - Used heavily in making fertilizers, dyes, adhesives, and other acids; **Plastic Resins** - 6th consecutive month (used in making plastic products); **Plastic Products** - 4th consecutive month; **Polyethylene** - 6th consecutive month; **Polypropylene** - 8th consecutive month; **Propylene** - 7th consecutive month; **Polystyrene; Styrene** - 9th consecutive month (used chiefly in making polystyrene, synthetic rubber, latex, polyester resins, and plastic products such as dinnerware, paneling, boat hulls, etc.); **Natural Gas** - 8th consecutive month, some reports of price increases; **Beef; Orange Juice** - After being reported up in price in July for the 2nd consecutive month; **Apple Juice** - 2nd consecutive month.

BUYING POLICY

Leadtimes for Capital Expenditures lengthened to 140 days in August, up from 137 days in July. This slight increase is still significant since it suggests that this lagging indicator is at last beginning to improve. Average leadtimes for Production Materials decreased in August to only 40 days, down from 47 days in July, and the lowest since NAPM began surveying leadtimes in January 1975. This record-setting short leadtime for Production Materials is reflected in the continued decline in inventories during a period of rising Production (i.e. if it takes less time to get inventory, manufacturers can get by with less inventory). Average leadtimes also declined for Maintenance, Repair, and Operating (MRO) Supplies in August, falling to 25 days from 26 days in July.

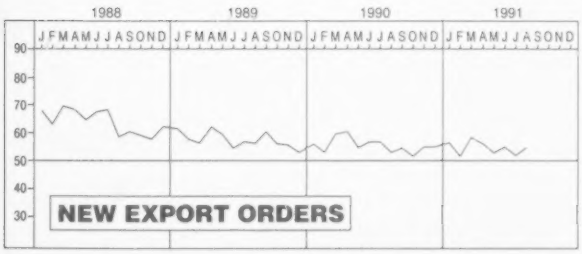


PERCENT REPORTING

Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 mos. and Longer	1 year + Days	Avg. Days
August 1991	12	7	15	21	29	16	140
July 1991	12	6	15	23	30	14	137
June 1991	11	8	12	24	31	14	138
May 1991	14	8	11	24	32	11	129

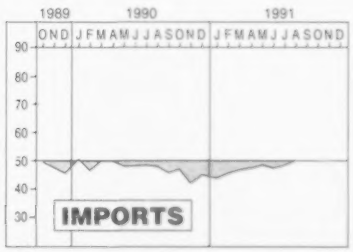
Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 mos. and Longer	1 year + Days	Avg. Days
August 1991	21	45	24	8	2	0	40
July 1991	19	43	28	6	2	2	47
June 1991	19	44	26	8	2	1	44
May 1991	21	40	27	8	2	2	47

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 mos. and Longer	1 year + Days	Avg. Days
August 1991	45	40	11	3	1	0	25
July 1991	41	45	11	2	1	0	26
June 1991	42	45	10	3	0	0	24
May 1991	45	43	7	5	0	0	24



New Export Orders continued to grow in August. The New Export Orders Index, not seasonally adjusted, rose to 55.0%, up from 52.5% in July, and about the average for all of 1991 (54.9%). Members exporting slipped to 77%, down slightly from 78% in the previous three months. This 78% was the most to report exporting their products since NAPM began surveying New Export Orders in January 1988.

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
August 1991	77	20	70	10	+10	55.0
July 1991	78	18	69	13	+5	52.5
June 1991	78	24	62	14	+10	55.0
May 1991	78	18	70	12	+6	53.0



Imports ended 15 consecutive months of decline in August. The Imports Index, not seasonally adjusted, rose to 50.0%, up from 48.0% last month. Although 50.0% also indicates no growth, it is the highest level registered since April and March 1990 (both at 50.0%). Since NAPM first began surveying Imports in October 1989, Imports grew in only one month — January 1990 (a weak 50.5%).

Imports	%Importing	%Higher	%Same	%Lower	Net	Index
August 1991	76	13	74	13	0	50.0
July 1991	78	11	74	15	-4	48.0
June 1991	77	9	77	14	-5	47.5
May 1991	77	10	76	14	-4	48.0

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured [New Orders, New Export Orders, Imports, Production, Supplier Deliveries, Inventories, Employment and Prices], this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

Responses to Buying Policy reflect the percent reporting the current months lead time, the approximate weighted number of days ahead for which commitments are made for Production Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.

Economic Growth Continues in September; PMI Inches up to 55.0%; Employment Index Rises to 48.3%

SEPTEMBER REPORT

Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of corporate purchasing, Pitney Bowes, Inc. Data for this report was collected in September 1991.

The manufacturing economy expanded in September for the fourth consecutive month, say the nation's purchasing executives in their latest **Report on Business.** Production rose for the fourth consecutive month, but at a slightly lesser rate of growth than in August. New Orders expanded for the fifth consecutive month, although the pace of growth was less than last month. New Export Orders also continued to grow in September, while Imports declined for the 15th time in 16 months.

Employment declined for the 32nd month in a row, but at the lowest rate of decline since April 1989. Inventories declined in September for the 34th straight month, but at the lowest rate of decline in more than two years. Supplier Deliveries declined again in September, after rising in July for the first time in 11 months. Prices continued to decline in September for the ninth consecutive month, although the rate of decline was the smallest in that span.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of corporate purchasing at Pitney Bowes, Inc. Said Bretz, "The economic recovery stabilized in September as the rate of growth edged up fractionally. After four months of continuing improvement, the rates of decline in three lagging indicators (Employment, Inventories, and Prices) decreased appreciably. Although the economy seemingly paused to catch its breath, the continued high level of growth in New Orders should be able to sustain moderate growth as the economy enters the final quarter of 1991."

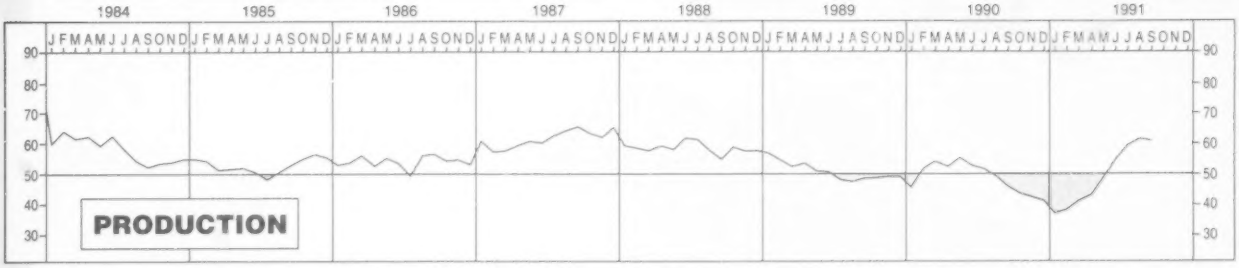
PURCHASING MANAGERS' INDEX

PURCHASING MANAGERS' INDEX (PMI)

September '90	44.9	April '91	42.1
October '90	43.6	May '91	45.4
November '90	41.6	June '91	50.9
December '90	40.5	July '91	51.8
January '91	37.7	August '91	54.8
February '91	38.5	September '91	55.0
March '91	40.0		

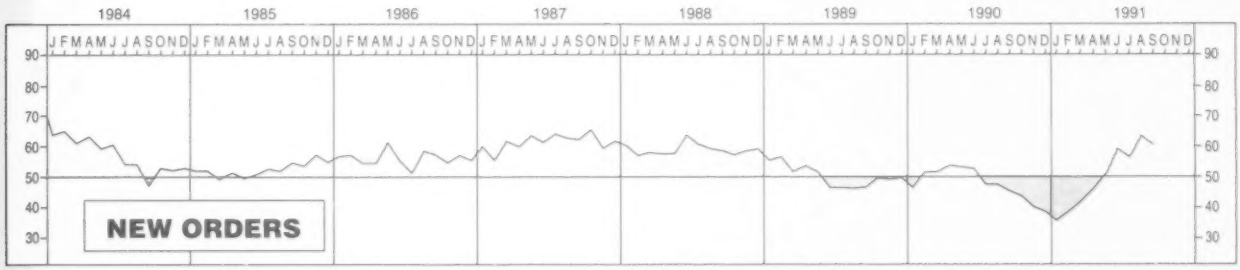
The Purchasing Managers' Index (PMI) rose to 55.0% in September and is the highest level reached since December 1988 (56.0%). The September rise marked the eighth straight month the PMI has increased from the previous month. September is also the fourth consecutive month over 50%. A reading above 50% indicates that the manufacturing economy is generally expanding; below 50%, that it is generally declining. Bretz added, "The PMI averaged 46.2% for the first three quarters of 1991, a rate that past experience generally indicates would be consistent with +0.7% real growth in the overall economy. However, if the PMI were to remain unchanged at the September level for the remainder of the year, then past experience also indicates this would be consistent with real GNP growth of approximately +1.4% for all of 1991."

BUSINESS



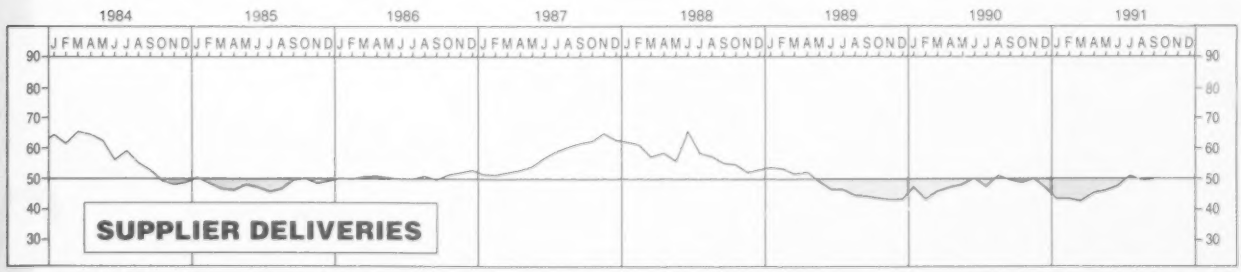
Production continued to grow in September 1991, although at a slightly lesser rate of growth than in August. The Production Index fell to 60.9%, down from 61.4% last month. Except for August, the 60.9% is the highest since July 1988 (61.2%). Growth in Production should continue through at least the final quarter of 1991, given the high level of growth in New Orders.

Production	%Better	%Same	%Worse	Net	Index
September 1991	38	49	13	+25	60.9
August 1991	34	49	17	+17	61.4
July 1991	29	53	18	+11	59.5
June 1991	31	51	18	+13	55.0



New Orders continued to expand in September for the fifth month in a row, although at a slower pace than in August. The New Orders Index fell to 60.4%, down from 63.1% last month and, except for August, is the highest rate of growth since July 1988 (60.6%). This level of growth in New Orders should be strong enough to provide continued growth in Production during the final quarter.

New Orders	%Better	%Same	%Worse	Net	Index
September 1991	37	50	13	+24	60.4
August 1991	38	45	17	+21	63.1
July 1991	31	46	23	+8	56.3
June 1991	38	42	20	+18	59.1



The Supplier Deliveries Index remained below 50% in September after breaching this neutral level in July 1991 for the first time since August 1990. The Supplier Deliveries Index did rise to 49.7%, barely higher than 49.4% in August. This indicates that suppliers are not generally having a problem meeting purchasers delivery requirements, despite the growth in Production.

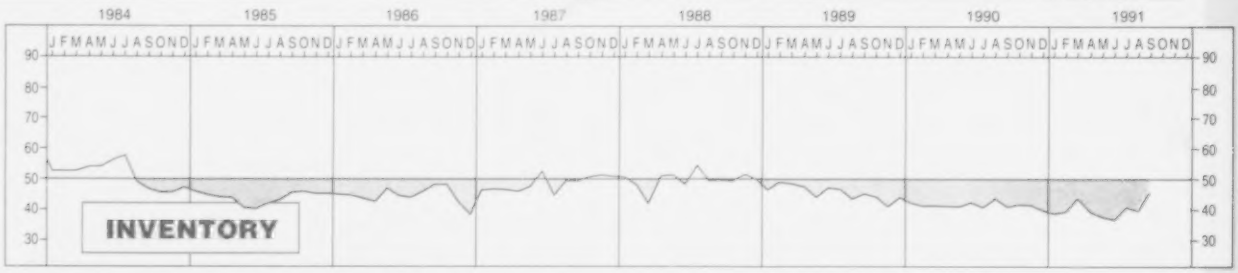
Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
September 1991	7	85	8	-1	49.7
August 1991	5	88	7	-2	49.4
July 1991	7	88	5	+2	50.8
June 1991	4	86	10	-6	47.5

IN SHORT SUPPLY

Bearings - 37th time in 38 months; **Castings; Caustic Soda/Soda Ash** - Used heavily in paper making, petroleum refining, and soap making; **Textile Dyes; Timber** - 2nd time in 5 months (essentially only in the Northwestern U.S., where conservationists' efforts have been successful in reducing the Douglas Fir acreage the government will allow to be cut, causing shortages in lumber, chips for paper mills, and threatened reduction of log exports to the Pacific Rim).

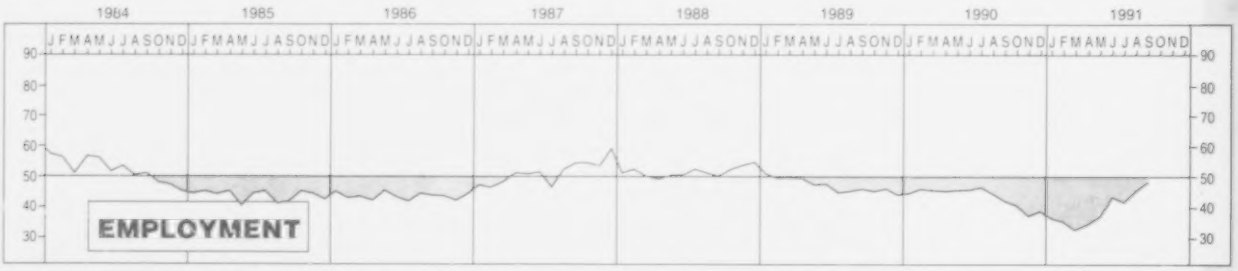
UP IN PRICE

Copper - Greater number of reports of price decreases; **Steel** - Equal number of reports of price decreases; **Steel Scrap; Bearings** - 2nd consecutive month; **Engines; Benzene** - 2nd consecutive month, after being reported down in price in July 1991 (used heavily in making medicinal chemicals, dyes, varnishes, lacquers, and resins); **Phthalic Anhydride** - After being reported down in price in August 1991 for 5th time in 7 months (used heavily in making artificial resins, benzoic acid, and phthalates); **Soda Ash; Styrene** - Used chiefly in making polystyrene, synthetic rubber, latex, polyester resins, and plastic products such as dinnerware, paneling, boat hulls, etc.; **Timber** - 4th time in 6 months, essentially only in the Northwestern U.S.; **Linerboard** - After being reported down in price in August for 5th time in 6 months — some doubts expressed about whether announced price increase will be accepted; **Corrugated Containers** - After being reported down in price in August for 18th time in 19 months — some doubts expressed about whether price increase will be accepted; **Folding Cartons; Uncoated Offset Paper** - 2nd consecutive month, after being reported down in price in July for the 7th consecutive month; **High Fructose Corn Syrup; Natural Gas** - After being reported down in price in August 1991 for 8th consecutive month; **Diesel Fuel** - 2nd consecutive month, after being reported down in price in July; **Gasoline** - 2nd consecutive month, after being reported down in price in July.



Inventories declined again in September for the 34th straight month. The Inventories Index rose to 45.7%, up sharply from 39.6% in August, and the highest since July 1989 (46.7%). In the 1982-83 recession, the Inventories Index did not exceed the 50% level until the eighth month after the recession ended. If this recovery is on a similar track, inventories should begin to grow by year-end (1991).

Inventories	%Higher	%Same	%Lower	Net	Index
September 1991	18	57	25	-7	45.7
August 1991	14	53	33	-19	39.6
July 1991	12	51	37	-25	40.7
June 1991	14	47	39	-25	36.7



Employment continued to decline in September for the 32nd straight month, although the rate of decline is the lowest in more than two years. The Employment Index rose to 48.3%, up from 45.5% in August, and the highest since April 1989 (49.4%). A similar increase in October would indicate real growth in manufacturing employment was achieved during the month.

Employment	%Higher	%Same	%Lower	Net	Index
September 1991	17	59	24	-7	48.3
August 1991	12	64	24	-12	45.5
July 1991	12	62	26	-14	41.7
June 1991	14	61	25	-11	43.3

Prices declined in September for the ninth consecutive month, although for the second straight month at the lowest rate of decline since January 1991. The Price Index rose to 48.9%, up sharply from 44.9% in August. The Price Index is still indicating continued low increases, if not decreases, in the Producer Price Index and Consumer Price Index over the remainder of the year.

Prices	%Higher	%Same	%Lower	Net	Index
September 1991	9	76	15	-6	48.9
August 1991	8	69	23	-15	44.9
July 1991	5	66	29	-24	38.3
June 1991	6	66	28	-22	39.5

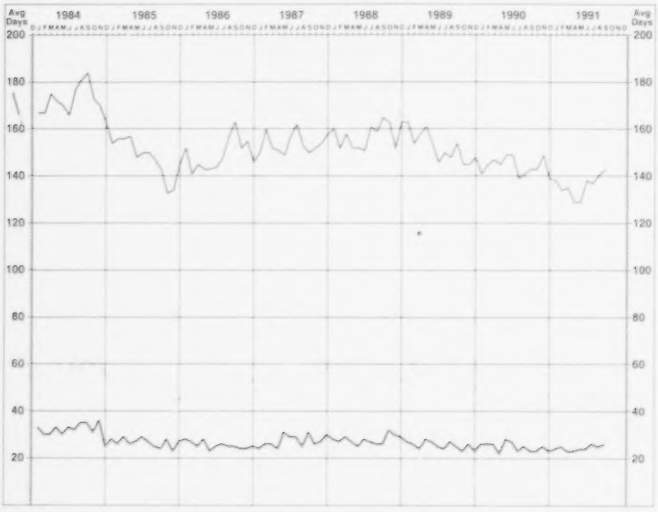
DOWN IN PRICE

Aluminum - 11th consecutive month; **Copper** - 11th consecutive month, many reports of price increases; **Platinum** - 2nd consecutive month; **Rhodium** - 2nd consecutive month (used heavily as an alloy with platinum and as a corrosion-resistant electroplate for protection of silverware from tarnishing); **Steel** - 8th consecutive month, equal number of reports of price increases; **Steel Pipe** - 3rd consecutive month; **Zinc** - 14th consecutive month; **Ferro Alloys** - Used heavily as a coating for welding rods; **Wood Pulp; Acetic Acid** - Used in making various acetates, plastics and rubber in tanning, a preservative in foods and a solvent for gums, resins and volatile oils; **Acetone; Ethanolamine** - Used in polishes, hair lotions, emulsifiers, as a dispersing agent in agricultural chemicals, and as a pharmaceutical aid; **Ethylene Glycol** - Used heavily in making antifreeze, brake fluid, plastic paint, and ink; **Fumaric Acid** - Used as a substitute for tartaric acid in beverages and baking powders, as a partial replacement for citric acid in fruit drinks, and as an antioxidant; **Glycerine** - 7th time in 9 months; **Methanol** - 5th consecutive month (used heavily as a solvent, a motor fuel additive, and in synthesizing other chemicals); **Sulfur** - 3rd consecutive month; **Sulfuric Acid** - 2nd consecutive month (used heavily in making fertilizers, dyes, adhesives, and other acids); **Plastic Resins** - 7th consecutive month; **Plastic Products** - 5th consecutive month; **Polyethylene** - 7th consecutive month (used heavily in making plastic packaging materials, kitchenware, tank and pipe linings, paper coatings, and textile stiffeners); **Polypropylene** - 9th consecutive month (used heavily in making plastic fabric, yarns, carpets, and packaging materials); **Disc Drives; DRAMS (256K, 1 and 4 Megabyte); Beef** - 2nd consecutive month; **Corn** - 3rd time in 5 months; **Orange Juice** - 2nd consecutive month — some reports of price increases; **Apple Juice** - 3rd consecutive month; **Tomatoes; Tomato Paste; Sugar** - Some reports of price increases.

BUYING POLICY

Average leadtimes lengthened for all three categories of purchases in September, confirming the growth in the economy. Average leadtimes for Capital Expenditures rose to 143 days, up from 140 days in August and 137 days in July, and the longest since November 1990 (149 days). This is a positive sign that the lagging Capital Expenditures category is finally showing signs of life.

Average leadtimes for Production Materials lengthened to 45 days, up from 40 days in August, although still less than 47 days in July. Average leadtimes for Maintenance, Repair, and Operating (MRO) Supplies rose to 26 days, up from 25 days in August, and along with July, the most since June 1990 (27 days).

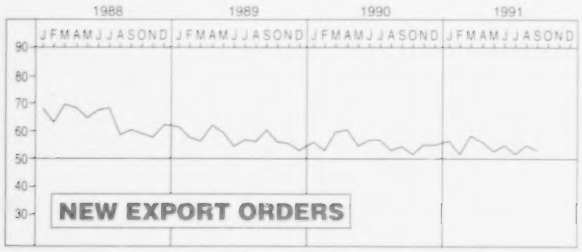


PERCENT REPORTING

Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 mos. and Longer	1 year + Days	Avg. Days
September 1991	12	8	12	23	28	17	143
August 1991	12	7	15	21	29	16	140
July 1991	12	6	15	23	30	14	137
June 1991	11	8	12	24	31	14	138

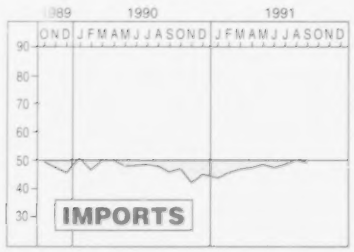
Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 mos. and Longer	1 year + Days	Avg. Days
September 1991	23	39	25	9	3	1	45
August 1991	21	45	24	8	2	0	40
July 1991	19	43	28	6	2	2	47
June 1991	19	44	26	8	2	1	44

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 mos. and Longer	1 year + Days	Avg. Days
September 1991	44	39	13	3	1	0	26
August 1991	45	40	11	3	1	0	25
July 1991	41	45	11	2	1	0	26
June 1991	42	45	10	3	0	0	24



New Export Orders grew again in September although at a lesser rate than in August. The New Export Orders Index, not seasonally adjusted, fell to 53.5%, down from 55.0% last month. Members exporting remained the same as in August and the average for all of 1991 to date (77%).

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
September 1991	77	18	71	11	+7	53.5
August 1991	77	20	70	10	+10	55.0
July 1991	78	18	69	13	+5	52.5
June 1991	78	24	62	14	+10	55.0



Imports declined in September for the 15th time in the past 16 months. The Imports Index, not seasonally adjusted, fell to 49.0 % in September, down from 50.0% in August. The 50.0% registered in August, although not indicating growth, was the highest level reached since April and March 1990 (both at 50.0%). The 79% of members importing in September was up from 76% in August and the most since last September (81%).

Imports	%Importing	%Higher	%Same	%Lower	Net	Index
September 1991	79	10	78	12	-2	49.0
August 1991	76	13	74	13	0	50.0
July 1991	78	11	74	15	-4	48.0
June 1991	77	9	77	14	-5	47.5

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured [New Orders, New Export Orders, Imports, Production, Supplier Deliveries, Inventories, Employment and Prices], this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

Responses to Buying Policy reflect the percent reporting the current months lead time, the approximate weighted number of days ahead for which commitments are made for Production Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.